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**Kerry County Council and
Killarney Municipal District**

**Killarney Town Traffic
Model/Traffic Management Study**

**Strategic Recommendations
Report**

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1.0 INTRODUCTION

Appointment

- 1.1 In September 2015, Kerry County Council and Killarney Municipal District appointed Malachy Walsh and Partners to carry out their Killarney Town Traffic Model/Traffic Management Study.

Brief

- 1.2 Kerry County Council and Killarney Municipal District's Brief for the Killarney Town Traffic Model/Traffic Management Study identified the aim of the study as *"a review of the transportation network and the associated demands with particular attention to the town centre area with the objective of determining the impact of proposed infrastructural measures to cope with the existing and future vehicular, pedestrian and cyclist traffic volumes"*.
- 1.3 The objectives of the Traffic Management Study include a Parking Strategy to *"recommend parking standards for the Study Area"* and to *"develop options for parking management in the Study Area and arrive at the optimum"*.
- 1.4 This strategy has been developed on the basis of the study to date, as outlined in the following reports, previously issued, and with reference to the Killarney Town Development Plan 2009- 2015, as appropriate.
- 1.5 This Study provides a review of the transportation networks and assesses infrastructural proposals providing recommendations.

Outline of Study Recommendations

- 1.6 The Traffic Management Study has, at its core, sustainable transport initiatives, including non-car based travel. It set outs measures to enhance the town centre environment, with improved pedestrian and cycle facilities. Additional parking areas, on the periphery of the town, are identified to reduce traffic circulating within the town centre. The study provides for the movement of pedestrians between the new and existing enhanced parking areas and the town centre. It sets out various short term, medium term and longer term recommendations.

Draft Recommendations

- 1.7 The draft recommendations, detailed in the previously issued Draft Strategic Recommendations Report for the Killarney Town Traffic Model/Traffic Management Study Area, would enhance transportation modes and facilities for all residents, tourists, workers, school goers, visitors and other users. The draft recommendations provide for increased civic space and enhanced public realm, within the town centre.

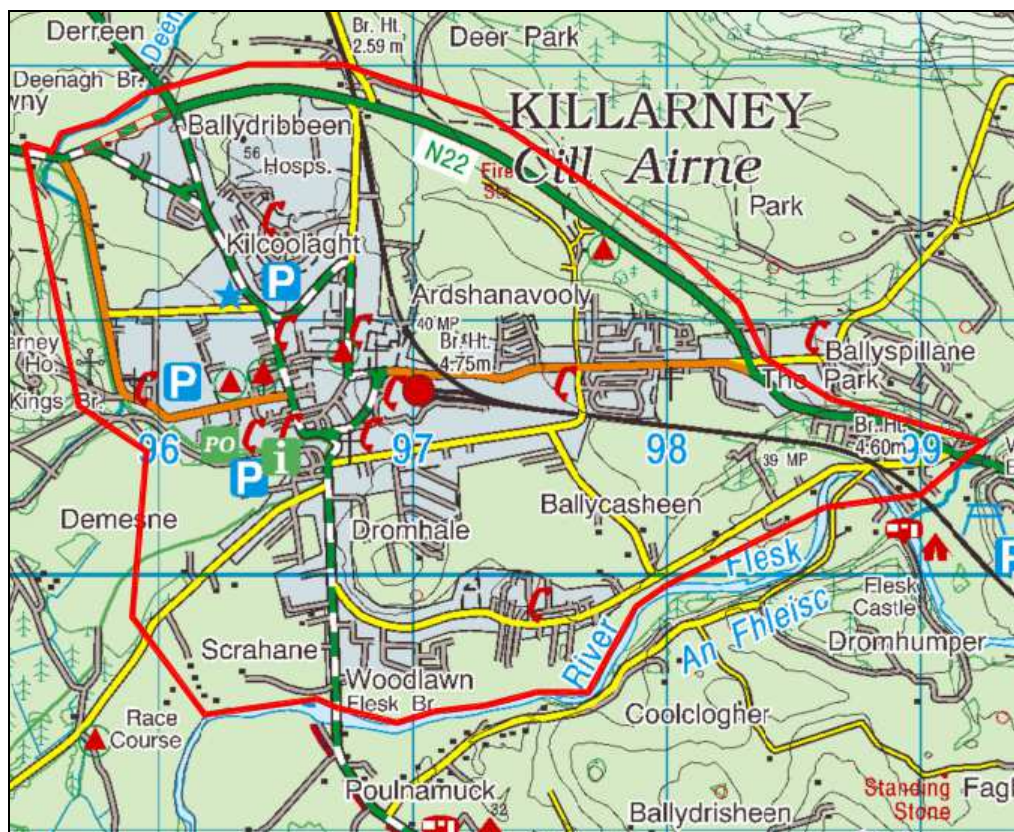


Figure: General Study Area

- 1.8 The recommendations include the following:
- Town centre pedestrian priority and shared surfaces;
 - Implementation of one-way traffic management;
 - Increased town centre accessibility and connectivity;
 - New road links;
 - Improvements to road layouts and junctions;
 - Facilities for pedestrians and cyclists; and
 - Measures to encourage non-car based travel modes, particularly cycling, walking and public transport.

- 1.9 The Recommendations are in response to the Study Brief, the Killarney Town Development Plan 2009- 2015 policies and Government policy, including *Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020*, and consultation with Killarney Municipal District Engineer.

Strategic Recommendations Report

- 1.10 The key deliverables of the Study, identified by the Brief, include a Strategic Recommendations Report.
- 1.11 This Strategic Recommendations Report has been prepared on the basis of the following:
- Previous Study reports and data collection;
 - On-site inventories of existing facilities and observations of existing operations, by Malachy Walsh and Partners, throughout the Study; and
 - Client consultation.

Study Reports

Existing Situation Report

- 1.12 An *Existing Situation Report* for the Study was issued in draft format for consultation with, and consideration by, Kerry County Council and Killarney Municipal District in October 2015. The *Existing Situation Report* included:
- Current land use;
 - Proposed development zoning;
 - Proposed development sites;
 - Existing road and street network;
 - Existing traffic flow;
 - Existing facilities for pedestrians;
 - Existing facilities for cyclists;
 - Existing access to schools;
 - Existing town centre parking;
 - Existing movement of goods vehicles;
 - Current public transport facilities.
- 1.13 The *Existing Situation Report* is provided in Appendix 1 of this Report.

Assessment of Existing Proposed Schemes at Design Stage Report

- 1.14 An *Assessment of Existing Proposed Schemes at Design Stage Report* was issued in November 2015. The report included an assessment of the following scheme proposals:
- High Street Improvement Works;
 - Plunkett Street Improvement Works;
 - High Street, St. Ann's Road, Rock Road Improvement Scheme - Reprioritisation of Traffic at High Street Junction;
 - Review of existing signal controlled junctions at Muckross Road / Ross Road and Muckross Road / Woodlawn Road; and
 - Number of Town Centre Jarvey Peak Hour Licences.
- 1.15 The *Assessment of Existing Proposed Schemes at Design Stage Report* is provided in Appendix 2 of this Report.

Modelling Report

- 1.16 A *Traffic Model Development and Traffic Schemes Modelling Assessments Report* detailing the macro-simulation model development and the modelling assessment of a number of road links and town centre traffic management schemes, using SATURN modelling software was issued in March 2016. The model base year is 2015 and the forecast modelled years are 2017 and 2021. The summer tourist season peak hour has been modelled for each year.
- 1.17 The *Traffic Model Development and Traffic Schemes Modelling Assessments Report* is provided in Appendix 3 of this Report.

Strategic Recommendations Report – Parking

- 1.18 An interim, *Strategic Recommendations – Parking*, Report was issued in April 2016. This has been incorporated within this Report.

2.0 DEVELOPMENT PLAN RECOMMENDATIONS CONTEXT

Kerry County Development Plan 2015-2021

- 2.1 Kerry County Development Plan identifies Killarney as a Hub Town with links to Mallow and Tralee as strategically important.
- 2.2 Kerry County Development Plan 2015 - 2021 policies and objectives include the following:
- *“Promote the sustainable development of walking, cycling, public transport and other sustainable forms of transport such as car-sharing and car-pooling, as an alternative to the private car, by facilitating and promoting the development of necessary infrastructure and by promoting initiatives contained within “Smarter Travel, A Sustainable Transport Future 2009-2020”;*
 - *Support and facilitate the sustainable provision of public parking facilities and “green parking areas” at appropriate locations, including bus parking within and on the edge of towns and villages; and*
 - *Promote the sustainable development of the public footpath network, the walking and cycling routes and associated infrastructure in the County, including where possible the retrofitting of cycle and pedestrian routes into the existing urban road network and in the design of new roads.*

Killarney Town Development Plan 2009-2015

- 2.3 It is an objective of the Killarney Town Development Plan 2009- 2015 to provide a comprehensive Town Centre traffic management, land use and parking strategy to improve the quality of the town centre.
- 2.4 As part of the Tourism Strategy Key initiatives includes: *“To advance the provision of dedicated coach parking facility”.*

Policies

2.5 Development Plan policy statements of the Council, are outlined hereunder, with respect to the strategy:

- To consult with Iarnród Éireann and Bus Éireann in improvements to pedestrian integration between the bus and railway station, with adequate provision for all road users;
- To liaise with Kerry County Council to identify suitable locations for Park & Ride facilities for Killarney Town;
- To install secure bicycle stands in strategic reasonably sheltered locations in the town centre, to be integrated with the town centre traffic management strategy;
- To create pedestrian priority concepts, cycle lanes and off-road cycle paths as required;
- Reduce car usage with increased use of public transport associated with new development;
- Seek to retain parking provision within redevelopment proposals;
- To review and modify, where necessary, clearways and no parking zones in town centre;
- To provide disabled parking and access facilities;
- To ensure that all new or upgrading hotel/leisure developments to provide off-street or underground parking facilities and cater for bus parking and drop-off;
- Maximising parking capacity in Killarney town;
- Review the management and pricing structures of car parks to encourage optimum usage/return and in particular to encourage long stay parking to the out-of town car parks and short stay in the town centre car park; and
- To provide a vehicle messaging systems.

Car Parking Standards

- 2.6 All new development will normally be required by the Planning Authority to provide adequate off-street car parking facilities.
- 2.7 Large retail developments and developments serving the public directly, such as recreational facilities, shall make provision for the parking and turning of buses.

Redevelopment Opportunities – Killarney Retail Corridor

- 2.8 Maintain or increase parking provision within any redeveloped site that is currently in use for parking.
- 2.9 Lack of coach parking is identified as a weakness for the town. *“As part of the Tourism Strategy a series of key initiatives have been identified”. These include: “To advance the provision of dedicated coach parking facility.”*
- 2.10 *“Car parking supply is clearly a very important issue, it is” “desirable to maintain or increase parking provision within any redeveloped site that is currently in use for parking.”*

Government Smarter Travel

- 2.11 Government Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020 key goals, targets and actions, by 2020, include the following:
- *“Work-related commuting by car will be reduced from a current modal share of 65% to 45%”;*
 - *“Car drivers will be accommodated on other modes such as walking, cycling, public transport and car sharing (to the extent that car commuting by these modes will rise to 55% by 2020)”;*
 - *“Our vision is to create a strong cycling culture in Ireland and ensure that all cities, towns, villages and rural areas will be cycling-friendly. Cycling will be a normal way to get about, especially for short trips. Next to walking, cycling will be the most popular means of getting to school, both for primary and secondary school”;*

- *“A culture of cycling will be developed to the extent that, by 2020, we envisage around 160,000 people cycling for their daily commute, up from 35,000 in 2006. Cycling will be encouraged as a mode for other purposes so that by 2020 10% of all our trips will be by bike”, and*
- *“We will ensure that urban walking networks are strengthened by increasing opportunities for walking and removing constraints”, “including providing safe pedestrian routes”.*

Consultations

- 2.12 The Study included initial and ongoing consultation with the Killarney Municipal District Office.

Site Inspections

- 2.13 On-site inspections and observations of the existing road network and traffic operations were carried out throughout the Study programme, to date.

3.0 STUDY METHODOLOGY

Strategic Recommendations' Design Methodology

3.1 The recommendations have been prepared with reference to relevant guidance documents, including the following:

- The Department of Transport, Tourism and Sport and the Department of Environment, Community and Local Government's Design Manual for Urban Roads and Street (DMURS);
- *Traffic Management Guidelines*, issued by the Department of Transport, the Dublin Transportation Office, and the Department of the Environment and Local Government;
- *Provision of Cycling Facilities | National Manual for Urban Area* issued by the National Transport Authority;
- *Transport*, published by Central Statistics Office, 2011;
- *National Cycle Policy Framework*, published by the Department of Transport; and
- *National Cycle Manual 2011*, published by National Transport Authority.

4.0 SUMMARY OF RECOMMENDATIONS

Overview

- 4.1 Pedestrian priority, shared surfaces, revised traffic management, parking management, and bus and coach parking are recommended within the town. A transport hub is recommended at the existing Railway Station and Bus Station. Upgraded infrastructure to enhance pedestrian and cycle facilities to the town centre and its environs, via all key radial routes, are recommended. This would improve safe access between Killarney town centre, its suburban areas and outlying parking areas, hotels, and new lands zoned for development.
- 4.2 An overview of the Study Recommendations is provided in Appendix 4A. Details are provided in the following Sections 5, 6, 7, 8 and 9.

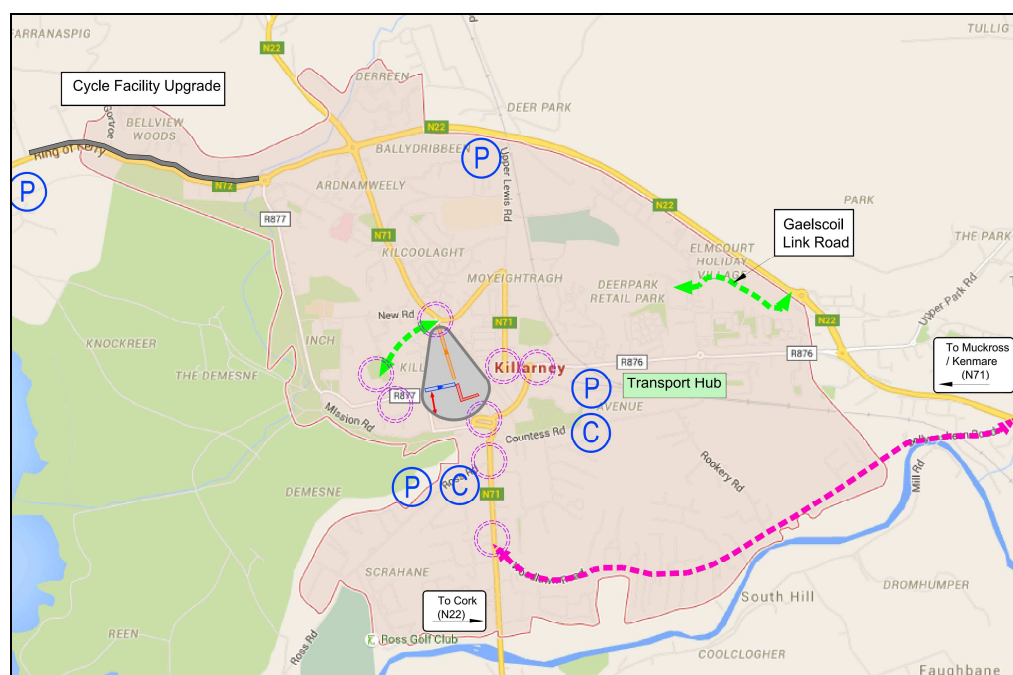


Figure: Study Recommendations Overview

Town Centre

- 4.3 Pedestrian accessibility and permeability would be enhanced. Vehicle access through areas such as Main Street, High Street, New Street Upper and Plunkett Street would be restricted to provide increased public area, and safer pedestrian movement.

- 4.4 The recommendations would improve access to the town centre from the new public transport hub, at the railway station, and preferred parking locations, via enhanced pedestrian facilities. Key town centre areas will be linked via new, or improved, pedestrian links. Access to the town centre by cycling would be improved by the introduction of restricted motorised vehicle areas, and further dedicated secure cycle parking.
- 4.5 The recommended measures outlined in this study, include the provision of the Inner Relief Road, forming the major route at its High Street intersection, enhanced capacity for drivers at The Hahah, reduced local traffic flow at the N22/Park Road roundabout and increased town centre parking charges.
- 4.6 Restricting access to Main Street and Plunkett Street, providing New Street Upper Street one-way only, and implementing the proposed traffic calming (Section 38) measures at High Street would establish a more pedestrian accessible town centre core area. An overview of Study Recommendations for the Town Centre Core Area is provided in Appendix 4B.

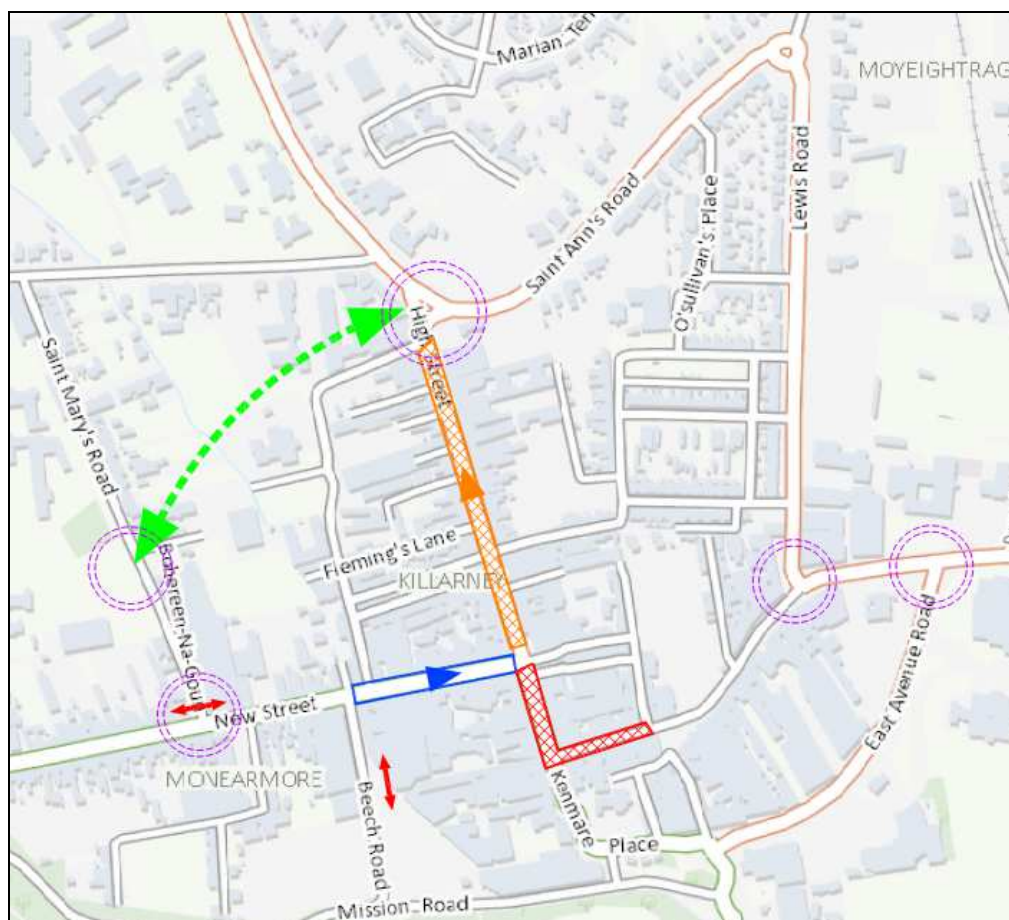


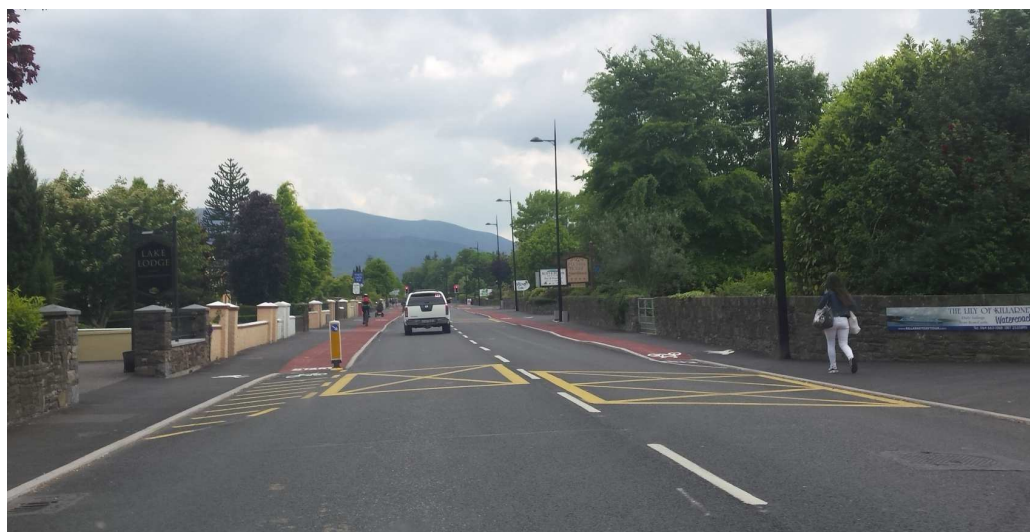
Figure: Town Centre Core Area Recommended Plan

Radial Routes

- 4.7 Movement to the town would be enhanced along all key radial routes. Improved safety for users would be provided by the introduction of improved junctions with incorporated traffic calming measures. Recommended infrastructural improvements would reduce traffic volumes at critical junctions. Key radial routes include:

- N72 toward Killorglin;
- N72 Muckcross Road;
- Park Road;
- Lewis Road; and
- Rock Road

- 4.8 Recommendations have been made to provide, or improve, pedestrian facilities along the radial routes, to the town. This is detailed in Section 5, hereunder.



Photograph: Muckcross Road Cycle Facility

Residential Areas

- 4.9 Killarney Municipal District Council currently apply the 'DMURS' philosophy to new, and existing housing development, which includes the provision of passive traffic calming measures. The concept of the recommended measures for these areas is to provide improved pedestrian movement, and safety while maintaining emergency vehicle access. It is recommended that this practice would continue.

Schools

- 4.10 Overall objectives of the Study include the promotion of non-car based travel. This includes cycling and walking via improved facilities. The recommendations provide for safer routes to school. These include cycle routes to and from schools, where feasible, improved pedestrian crossing facilities and footways, and the promotion of car pooling and walking buses.

Parking Strategy

- 4.11 A parking strategy is recommended, and detailed in Section 7 of this report. This includes recommended pricing and duration control changes. Vehicle parking for all users has been considered. The provision of additional out of town parking, with Park and Ride, or Park and Stride is recommended. Increased awareness and visibility of existing surface parking on radial routes into the town is recommended.
- 4.12 Additional enforcement of by-laws is recommended. No increase in the core town centre area public parking provision is recommended. Limited new parking spaces are recommended for new developments in the town centre, with reference to Smarter Travel objectives.

Future Development Sites

- 4.13 The Study recommends measures to ensure appropriate access to and from the town. The opportunity to implement these measures could be facilitated via the provision of new or enhanced parking areas at future development sites, to be identified in Kerry County Council's Development Plan.

5.0 RECOMMENDED IMPROVEMENTS

- 5.1 This section outlines the details of the recommended measures on a route and area basis, for the short, medium and long term. Short term considers measures that may be implemented imminently. Medium term refers to between year 2017 and 2021, with long term envisaged to occur after the forecast year 2021.
- 5.2 The sequencing and provision of significant new, or enhanced, quantum of off-street parking could facilitate the provision of measures such as pedestrianisation with reduced impacts.
- 5.3 The recommended measures are outlined hereunder.

Main Street

- 5.4 Kerry County Council propose to enhance Main Street.
- 5.5 Pedestrianising Main Street would provide the following town centre benefits:
- Reduced town centre traffic;
 - Enhanced pedestrian linkage;
 - Reduced air/noise pollution;
 - Re-establish the Main Street as a public area, rather than a set-down/ car park/ loading area;
 - Safer environment for the public; and
 - Increased attractiveness of the town.
- 5.6 It is recommended that minor improvements would be provided in the short term. It is recommended that measures should be provided to restrict set-down to the south of the loading bay at the west side of Main Street. This could be in the form of a kerbed 'build-out'. It is recommended that this would be implemented in the short term.
- 5.7 It is recommended that access to Main Street should be restricted in the medium term, allowing access only to pedestrians/ cyclists, and public transport after 11.00 am. Delivery access would be provided prior to 11.00 am via Kenmare Place.

- 5.8 The recommended improved pedestrian facilities would improve access to the town from the nearby parking areas. The recommended layout would include the provision of bus set-down area and bus shelter, bicycle parking and motorbike parking.
- 5.9 The provision of the proposed Inner Relief Road would reduce the vehicle impact of this proposal. The provision of enhanced circulation at The Hahah would improve its capacity to facilitate increased traffic volumes on Mission Road.

Plunkett Street

- 5.10 It is recommended that Plunkett Street should be pedestrianised in the medium term. This would extend from Main Street, and enhance pedestrian movements. Kenmare Place would have reduced traffic movements which would improve circulation at The Hahah. Similarly, the provision of enhanced circulation at The Hahah would improve its capacity to facilitate increased traffic volumes on Mission Road.

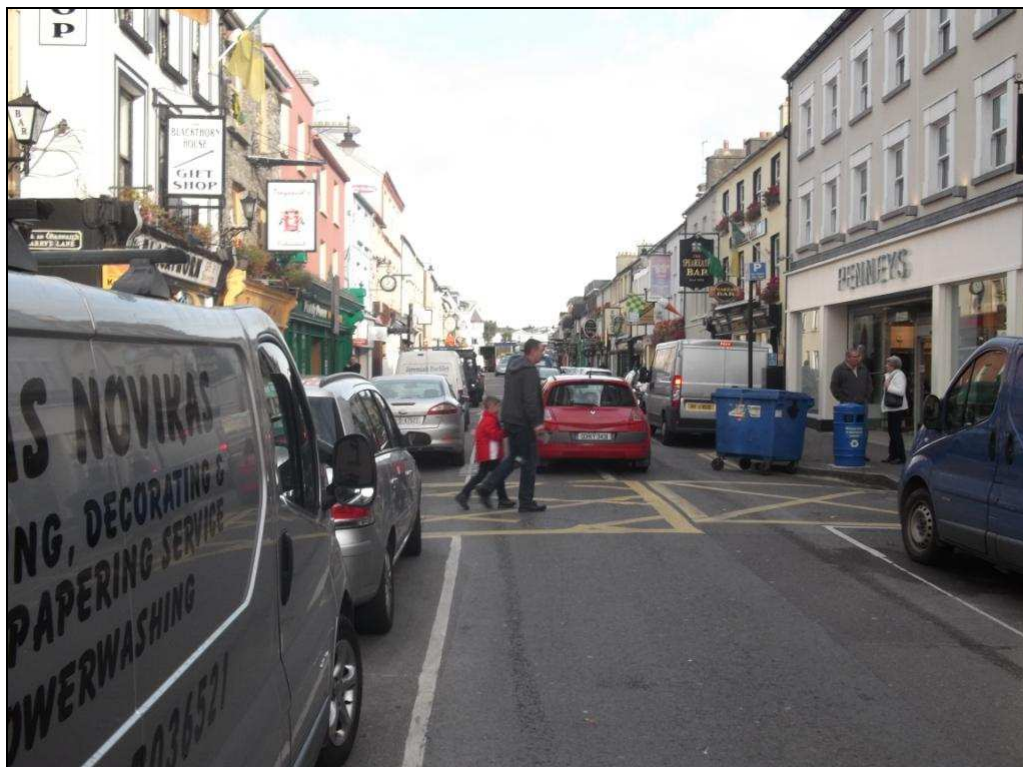


Photograph: Main Street

- 5.11 The proposed traffic calming (Section 38) measures for Plunkett Street would include proposed enhanced pedestrian footways, with bollards, and a reduced carriageway. The existing two lane approach to Main Street would be changed to provide a single lane for left and right turning movements. A raised table crossing would be provided in line with the footway along the east side of Main Street. Details of the proposed Scheme are provided in the *Assessment of Existing Proposed Schemes at Design Stage* Report, and the proposed layout is provided in Appendix B of that Report. The *Assessment of Existing Proposed Schemes at Design Stage* Report is provided in Appendix 2 of this Report.
- 5.12 It is recommended that Plunkett Street's two lane approach should be reduced to provide a single lane approach in the short term. Complementary measures should be provided to restrict set-down to the south of the loading bay to the west side of Main Street. This could be in the form of a kerbed 'build-out'. These measures should be provided in the short term with a medium term objective to pedestrianise Plunkett Street.
- 5.13 It is recommended that the option of removing the bollards from the proposed scheme should be considered. The proposed bollards would reduce the capacity of the footways along Plunkett Street, and could result in pedestrians stepping on the carriageway particularly during peak times putting them at risk of vehicular impact.

High Street

- 5.14 Kerry County Council proposes to upgrade High Street's existing alignment. Details of the proposed Scheme are provided in the *Assessment of Existing Proposed Schemes at Design Stage* Report, and the proposed layout is provided in Appendix B of that Report.
- 5.15 It is recommended that the proposed works at High Street should be progressed subject to detailed design in the short term. The provision of an enhanced crossing facility for disabled and visually impaired users should be considered.



Photograph: High Street

Reprioritisation of Traffic at High Street Junction

- 5.16 The proposed High Street, St Ann's Road, Rock Road Improvement Scheme was assessed as part of the *Assessment of Existing Proposed Schemes at Design Stage Report*. Details of the proposed Scheme, as presented for a traffic calming scheme Planning Application (Section 38), are provided in the *Assessment of Existing Proposed Schemes at Design Stage Report*, and the proposed layout is provided in Appendix B of that Report.
- 5.17 It is considered that the safety improvements, and the more standard layout which would be provided, would warrant the potential impact to traffic flow on High Street.
- 5.18 It is envisaged that there would be a benefit to safety as a result of the scheme, via the provision of a more standard layout with improved pedestrian facilities.

- 5.19 It is recommended that the scheme would be carried out in the short term, subject to details outlined in the *Assessment of Existing Proposed Schemes at Design Stage* Report. If the Inner Relief Road is to be implemented, this would result in changed to the traffic pattern in this area and would be likely to change this junction layout, as per this recommendation.
- 5.20 It is recommended that High Street would be the minor approach in the medium term, should the Inner Relief Road be implemented.

Road Network Urbanisation (Public Realm Enhancement)

- 5.21 Observations in relation to the existing pedestrian inventory are detailed in the submitted *Existing Situation Report*.
- 5.22 Recommendations to improve pedestrian movement include:
- Regularisation of the commercial loading area on the east side of Beech Road to provide a continuous footway along the desire-line;
 - Implementation of the proposed pedestrian enhancement measures at High Street;
 - Proposed restricted access at Main Street and Plunkett Street;
 - A controlled crossing facility at the east end of New Street at its Main Street/High Street junction, to facilitate pedestrian movement along the west side of Main Street/High Street, and to and from New Street;
 - Provision of segregated pedestrian routes within The Glebe Car Park entrance/exit area;
 - Enhanced pedestrian priority at the entrance and exit junctions on College Street, at The Glebe Car Park, which is at-grade;
 - Enhanced pedestrian routes adjacent to the taxi rank at The Glebe Car Park;
 - Refuge for vulnerable users at the carriageway adjacent to the boundary wall, on the east side of Port Road, from south of New Road; and
 - Connected footways, locally, on the east side of Lewis Road; on the north side of Park Road, east of Countess Road to the N22 Park Road Roundabout; on the west side of Rock Road, north of New Road; on the west side of Arbutus Drive, north of the Tesco access to Deerpark Close; and on Ballycasheen Road, east of White's Bridge.

- 5.23 Proposed enhanced pedestrian facilities at High Street, Main Street and Plunkett Street were assessed and detailed in the *Assessment of Existing Proposed Schemes at Design Stage* Report. It is considered that this would improve pedestrian safety and should be implemented. This would be consistent with the recommended strategy for enhancing the town centre core area.

High Street/ Monsignor O’Flaherty Road Junction

- 5.24 As outlined in the *Assessment of Existing Proposed Schemes at Design Stage* Report, it is recommended the access from St. Ann’s Road would be removed.
- 5.25 It is recommended that High Street would be the minor approach in the medium term, should the Inner Relief Road be implemented.



Photograph: Monsignor O’Flaherty Road from High Street

East Avenue/ Park Road Roundabout Junction

- 5.26 As outlined in the *Existing Situation Report* the East Avenue/ Park Road Roundabout Junction, located in the town centre, is not pedestrian friendly, with limited facilities for vulnerable users. It is recommended that the junction should be upgraded, with enhanced pedestrian facilities, to improve the provision for vulnerable users. Uncontrolled crossings should be provided at the recommended upgraded roundabout.

Lewis Road/ College Street Roundabout Junction

- 5.27 As outlined in the *Existing Situation Report* the Lewis Road/ College Street Roundabout Junction, located in the town centre, is not pedestrian friendly, with limited facilities for vulnerable users. There are wide crossings, and the splitter island on the east side was observed to be used as a delivery set-down for large vehicles. It is recommended that the junction should be upgraded, with enhanced pedestrian facilities, to improve the provision for vulnerable users. Uncontrolled crossings should be provided at the recommended upgraded roundabout.

The Hahah

- 5.28 The Hahah provides connectivity for through traffic, and access to the public road network for Jarveys from its central island. The junction suffers from congestion, particularly from its Muckross Road approach, and Mission Road approach during peak season. It is recommended that the two lane approach from Mission Road would be increased in the short term. The potential option of providing an enhanced rotary system layout to maximise the movement of through traffic should be considered. This would increase approach lanes and circulation capacity, limiting weaving movements through the junction, particularly on its south side. Clear advance direction signage would be required to complement this design due to potential demand for changing directions by tourists. A preliminary layout is provided in Appendix 4C.
- 5.29 It is envisaged that the capacity of The Hahah would improve due to the implementation of proposals at Main Street and Plunkett Street due to reduced traffic volumes at the Kenmare Place approach to The Hahah.

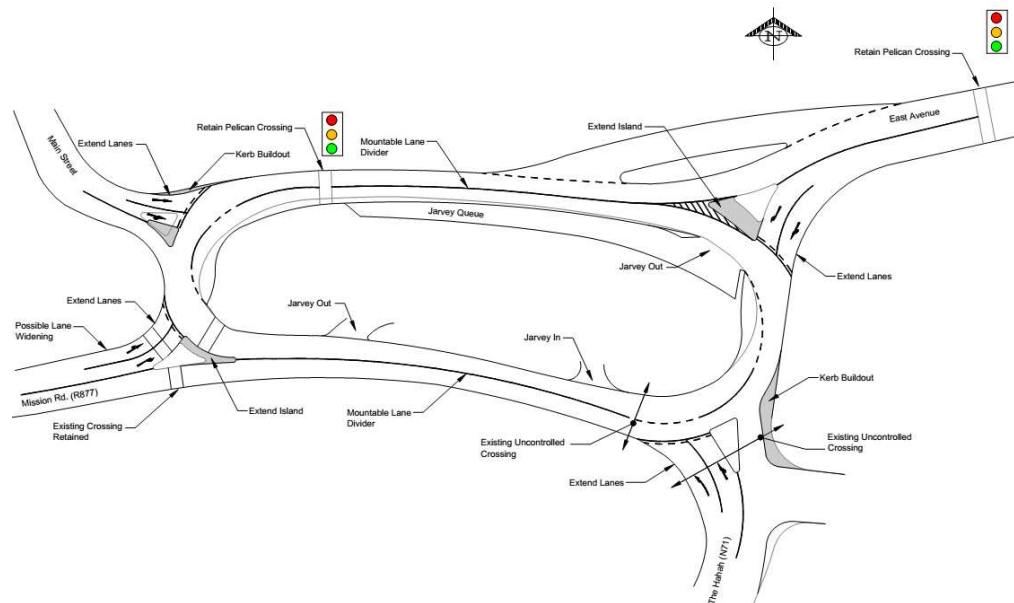


Figure: The Hahah

Port Road/ New Road Junction

- 5.30 The existing pedestrian crossing facility across New Road at this junction is wide, with a narrow waiting area. This waiting area is of limited width to facilitate a person pushing a pram, or a wheelchair. It is recommended that the width should be enhanced to a minimum width of 2.0 metres, with reduced corner radii provided.

Cathedral Place/ Port Road

- 5.31 Delays and queuing would be likely to be reduced, locally, as a result of implementing a two lane approach to the junction. The existing Cathedral Place approach is wide. However, the flare length is short and consequently does not provide for two-lane queuing. It is likely to be geometrically feasible to amend the approach to provide enhanced queuing lanes. There would, however, be a likely impact on the street landscaping in the junction area. It is recommended that the works would include reduced junction radii to reduce the reduction in landscaped areas. The works could result in the centreline of the Cathedral Place approach being relocated further north, closer to the existing Zebra crossing on Port Road. Therefore, the Zebra crossing would need to be reviewed in the context of the works but may not be negatively impacted.

Bohereen Na Goun/ New Street Junction

- 5.32 There are no existing pedestrian facilities along the west side of Bohereen Na Goun, and the crossing facility across New Street at this junction is substandard. It is recommended that facilities in this junction and area should be upgraded. A complete junction upgrade would be required, should the proposed Inner Relief Road be constructed. It is recommended that a signal controlled junction with pedestrian crossing facilities should be provided to facilitate the increased demand.

Muckross Road

- 5.33 The existing alignment of Muckross Road, and the signal controlled junctions at Muckross Road / Ross Road and Muckross Road / Woodlawn Road were assessed. Details of the Assessment are provided in the *Assessment of Existing Proposed Schemes at Design Stage* Report, and outlined hereunder.

Additional Car Park

- 5.34 It is recommended that the option of providing a car park south of Ross Road would be pursued, to reduce traffic volumes on the north end of Muckross Road and in the town centre.

Increased use of Ballycasheen Road

- 5.35 Ballycasheen Road / Woodlawn Road provides for a southern route around Killarney connecting the N71 with the N22. Details of the Assessment are provided in the *Assessment of Existing Proposed Schemes at Design Stage* Report. It is recommended that increased signage should be provided to promote the use of this existing bypass route of the town, subject to a detailed safety review of the route.

Enhanced Sustainable Transport

- 5.36 A mode shift from car based transport to walking, cycling or public transport could reduce traffic volumes, queuing and delays for inbound and outbound traffic at Muckross Road.

5.37 The provision of a more continuous, safer, enhanced cycle infrastructure could encourage more use of cycling and a shift from car based transport, and is recommended. The option of continuing the cycle and pedestrian facilities, along with trip-end facilities, such as town centre high quality bike parking is recommended. Passive speed reduction measures should be provided to facilitate cyclists on carriageway, where off-road facilities are not feasible, to provide continuity. These measures could include:

- Lane narrowing, as appropriate;
- Vertical definition;
- Horizontal curves;
- Non-excessive sight visibility distances; and
- Street furniture/ appropriate planting.

5.38 There may be an opportunity for increased use of public transport in the area. It is recommended that this would be enhanced, as outlined in the *Assessment of Existing Proposed Schemes at Design Stage Report*.

Linked Signals

5.39 The potential benefits of linking the signals at Ross Road and Woodlawn Road junctions on Muckross Road were considered.

5.40 Benefits from linking signals typically include:

- Reduced delays;
- Prioritising specified routes; and
- Optimisation of road capacity.

5.41 There are a number of direct accesses between the Ross Road and Woodlawn Road junctions that may reduce some the effectiveness of the linked signals. The junctions are located approximately 425 metres apart. It is, therefore, likely that monitoring of their operation would be required, and adjustments made accordingly.

5.42 It is concluded that linking the signals could yield some benefit and control to traffic flow on Muckross Road.

Reduced Movement in Close Proximity to Junctions

- 5.43 There are permitted vehicle turning movements in close proximity to Ross Road and Woodlawn junctions. It is recommended that these should be reduced, where possible, as outlined in the *Assessment of Existing Proposed Schemes at Design Stage Report*.

Other

- 5.44 The existing signal junction layouts on Muckross Road provide minimal delay from pedestrians by providing two crossings only, at both junctions. Providing a flashing amber signal for left turning traffic would provide minimal benefit in terms of reduced delays and is considered to result in increased risk of collisions.
- 5.45 There is a stone wall along Muckross Road, immediately adjacent to the northbound carriageway edge, approximately 200 metres south of Ross Road. There is a footway provided to the west of the wall. The position of the wall adjacent to the carriageway is undesirable. It is understood that conditions of an existing decision to grant planning permission for a permitted car park at this location includes setting back the wall from the carriageway edge. This condition should be implemented.

N72 Killorglin Road

- 5.46 Extensive queuing is observed during peak seasons on the N72 Killorglin Road at Ballydowney Roundabout, and on the Dr Han Liebherr Road approach to Cleeny Roundabout. There are limited options for improvement during peak seasons. The option of increasing awareness of the existing car park on the N72 adjacent to Killarney Golf and Fishing Club access should be considered. There is an existing one-way westbound cycle lane at road carriageway grade to Fossa from Killarney.
- 5.47 The provision of an eastbound cycle facility is recommended. This could be in the form of a shared cycle pedestrian facility along the north side of the N72. However, the existing footway width would not be sufficiently wide.
- 5.48 Enhanced signage and increased awareness of existing off-road routes to the town via the National Park should be considered.

- 5.49 It is understood that there is a traffic calming scheme currently being developed for the section of the N72 between the existing scheme near Killarney Golf and Fishing Club and Ballydowney Roundabout. That scheme should consider these recommendations.

N22 Killarney Bypass

- 5.50 Recommend measures are not proposed at this stage for the N22 Bypass alignment, which is generally operating in accordance with its design. Park Road Roundabout would have reduced traffic volumes as a result of the recommended Deerpark Link Road, as detailed in the *Traffic Model Development and Traffic Schemes Modelling Assessments Report*, provided in Appendix 3. Longer term measures include Killarney to Farranfore Bypass. This could provide further opportunities for the N22 Bypass which would be in the long term.

Schools

- 5.51 The strategy recommends the existing traffic management arrangements at schools would be retained. As outlined in the *Existing Situations Report*, further enforcement of the existing traffic management, including parking restrictions is required. Particular non-compliance with parking regulations was observed at St. Oliver's School on Rookery Road.

Future Development Sites

- 5.52 The Study recommends measures to ensure appropriate access to and from the town. The opportunity to implement these measures could be facilitated via the provision of new or enhanced parking areas at future development sites, to be identified in Kerry County Council's Development Plan.

Signage

- 5.53 It is recommended that non-essential signage within the road reservation, including footways, should be removed. This would improve road safety and access, both for drivers and vulnerable users.

- 5.54 It is recommended that signage, directing visitors to the town centre should be provided. Advance information signage information for drivers should provide guidance to parking areas which would reduce distance, without travelling through the town centre.
- 5.55 Direction signage located at the intersection of Main Street/ High Street and New Street that is potentially misleading to drivers should be amended in the short term. It currently directs people southbound toward Main Street, contrary to the one way northbound traffic flow. This is presented to drivers approaching the junction from New Street. The provision of one-way westbound only traffic management on New Street Upper would also resolve the issue.
- 5.56 It is recommended that increased awareness should be provided to encourage non-stopping through traffic, during the peak season, between Cork Road and Muckross Road via Ballycasheen/ Woodlawn Road. This would be subject to a safety review.

Smarter Travel/ Mobility Planning

- 5.57 It is recommended that the measures outlined under the Government's Smarter Travel policy should be implemented via ongoing development plans. These include the following initiatives:
- Walking and Cycling;
 - Public Transport;
 - Traffic Management Parking;
 - Travel Awareness and Marketing;
 - School Travel Plans;
 - Workplace Travel Plans;
 - Car Sharing Schemes; and
 - Teleworking, Teleconferencing and Homeshopping.

6.0 TRAFFIC MODELLING ASSESSMENTS

- 6.1 The *Killarney Town Traffic Model Development and Traffic Schemes Modelling Assessments Report* details the town centre traffic management schemes assessed using the Study 2017 and 2021 forecast year models.
- 6.2 The new road links and town centre traffic management schemes assessed using the Study 2017 and 2021 forecast years model are as follows:

New Road Links

- Inner Relief Road linking High Street and New Street via Boreen Na Goun;
- Gaelscoil Road linking Deerpark with the N22 Killarney Bypass; and
- Southern Outer Relief Road linking Cork Road (N22) and Muckcross Road (N71).

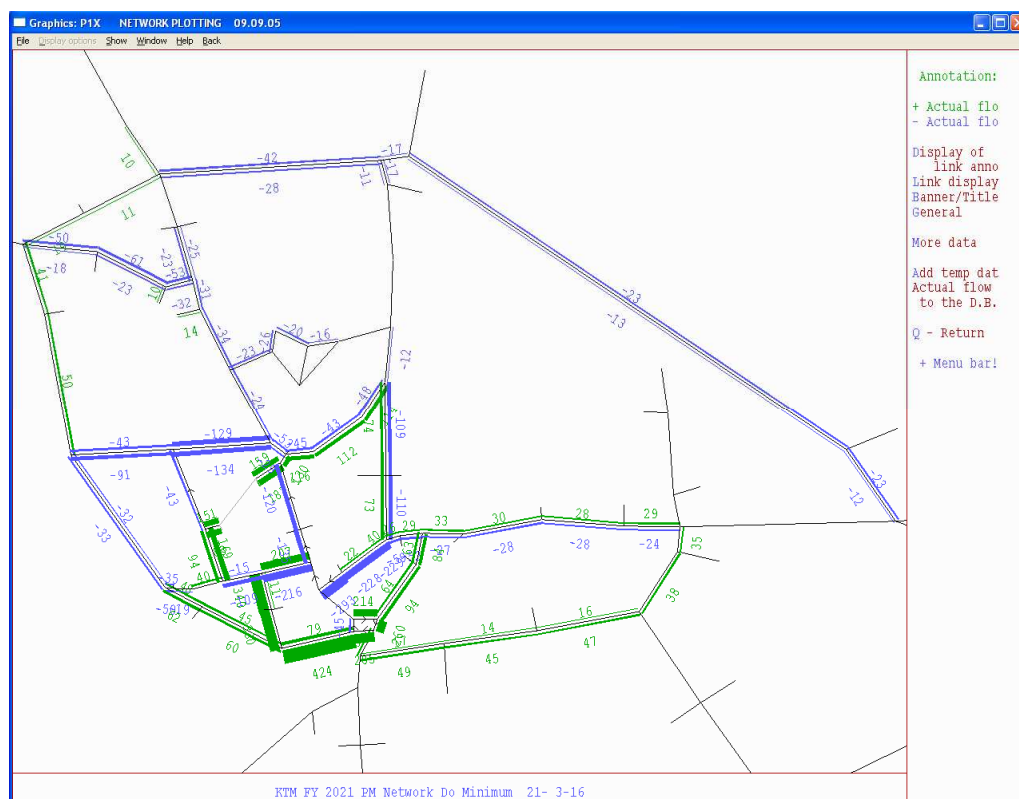
Traffic Management Schemes

- Main Street pedestrianised;
- Main Street and Plunkett Street pedestrianised;
- New Street Upper one-way eastbound;
- New Street Upper one-way westbound; and
- New Road one-way eastbound.

Inner Relief Road + Traffic Management Schemes

- Inner Relief Road linking High Street and New Street via Boreen Na Goun plus Main Street pedestrianised; and
- Inner Relief Road linking High Street and New Street via Boreen Na Goun plus Main Street and Plunkett Street pedestrianised.

Figure: Inner Relief Road + Main Street Pedestrianised 2021 Traffic Flow Changes



6.3 Assessment details are outlined in the *Killarney Town Traffic Model Development and Traffic Schemes Modelling Assessments Report*, provided in Appendix 3. The following town centre traffic management recommendations were concluded, on the basis of the modelling assessments:

New Road Links

Inner Relief Road

6.4 The proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun would significantly reduce peak hour traffic flows on High Street and New Road. This is recommended, subject to satisfactory junctions design including High Street, St. Ann's Road and Bohereen Na Goun.

Gaelscoil Road

6.5 The proposed Gaelscoil Road (Deerpark/N22 Killarney Bypass Link) would reduce peak hour traffic flows locally on Park Road and the Killarney Bypass Road, in the vicinity of Park Road Roundabout. This is recommended.

Southern Outer Relief Road

- 6.6 The proposed Southern Outer Relief Road, linking Cork Road (N22) and Muckross Road (N71), would facilitate less than 300 vehicles peak hour forecast traffic flows. The outer Relief Road would reduce peak hour traffic flows by up to 6% locally on Park Road, at the Park Road Roundabout. This section of Park Road would continue to operate at capacity both with and without the proposed Outer Relief Road. It is recommended that a specific origin-destination survey should be carried out during peak season to assess, in detail, the likely demand for the route.

Glebe Link Road

- 6.7 The proposed Glebe Link Road would result in increased traffic flows in the town centre core area. These increases are not considered desirable, particularly in the context of the objective of providing a safe core area with improved pedestrian access and safety. This link is not recommended.

Traffic Management Schemes

Main Street Pedestrianised

- 6.8 Main Street pedestrianised would eliminate almost 500 vehicles peak hour traffic flows from Main Street, and eliminate westbound traffic flows on New Street Upper. Main Street pedestrianised would also significantly reduce traffic flows on Plunkett Street and College Road.
- 6.9 Main Street pedestrianised would significantly increase forecast peak hour traffic flows on Mission Road (by over 500 vehicles), Beech Road and eastbound on New Street. Mission Road would operate with similar V/C ratios than without Main Street pedestrianised. It is envisaged that the vast majority of such traffic is town centre parking-based terminating/stopping traffic.
- 6.10 It is recommended that this would be implemented in the medium term.

Main Street and Plunkett Street Pedestrianised

- 6.11 Main Street and Plunkett Street pedestrianised would eliminate almost 500 vehicles peak hour traffic flows on Main Street and up to approximately 450 vehicles on Plunkett Street, and eliminate westbound traffic flows on New Street Upper. Main Street and Plunkett Street pedestrianised would also reduce traffic flows on College Road and High Street.
- 6.12 Main Street and Plunkett Street pedestrianised would significantly increase forecast peak hour traffic flows on Mission Road (by approximately 450 vehicles), Beech Road and eastbound on New Street. Mission Road would operate with similar V/C ratios than without the pedestrianised scheme. It is envisaged that the vast majority of such traffic is town centre parking-based terminating/stopping traffic.
- 6.13 It is recommended that this would be implemented in the medium term. The proposed improvements at The Hahah would reduce the impact of the increased southbound traffic flow at Mission Road.

New Street Upper One-Way Eastbound

- 6.14 New Street Upper one-way eastbound would eliminate approximately 200 westbound peak hour vehicles on New Street and reduce traffic flows on Plunkett Street. New Street one-way eastbound would increase forecast peak hour traffic flows on Mission Road by approximately 200 vehicles. Mission Road would operate with similar V/C ratios than without the one-way scheme. This is recommended.

New Street One-Way Westbound

- 6.15 New Street one-way westbound would eliminate over 150 eastbound peak hour vehicles on New Street and reduce traffic flows on High Street and Park Road. New Street one-way westbound would increase forecast peak hour traffic flows on New Road and Kenmare Place. New Road would operate in excess of practical capacity in 2021 with the scheme in place. This is not recommended.

New Road One-Way Eastbound

- 6.16 New Road one-way eastbound would eliminate over 200 westbound peak hour vehicles on New Road, and reduce traffic flows on Port Road (South). New Road would operate with higher V/C ratios and in excess of its practical capacity in 2021. Road one-way eastbound would increase traffic flows on its surrounding street and road network, including to in excess of practical capacity on Rock Road. On the basis of the analysis and safety implications, this is not recommended, out of the school times. The existing controlled short term implementation during school term should be maintained.

N22 Killarney Bypass/ Upper Lewis Road Banned Right Turns

- 6.17 There may be a potential safety benefit from reducing traffic turning movements from a priority controlled junction within the 100 kph speed limit. However, the diversion of traffic would be from the N22 Killarney Bypass to Park Road, and other town centre roads that are currently experiencing congestion. This would have a negative impact on pedestrian movement and traffic flow in the town and is therefore not recommended.
- 6.18 The junction is a generally well designed, at-grade, priority controlled junction, including a dedicated right turning facility. The recorded traffic turning volumes between Lewis Road and the Bypass are not insignificant. However, the safe introduction of a signal controlled or a roundabout configuration would require a reduced speed limit. It is likely that Transport Infrastructure Ireland (TII) would have concerns in this regard. It is recommended that liaison should take place with TII.

Inner Relief Road + Traffic Management Schemes

Inner Relief Road + Main Street Pedestrianised

- 6.19 Compared to the Main Street pedestrianised scheme only, the provision of the Inner Relief Road and Main Street pedestrianised would result in similar increased forecast traffic flows on Mission Road, and similar reduced traffic flows on Plunkett Street and College Road. The provision of the Inner Relief Road and Main Street pedestrianised would result in higher reductions in forecast traffic flows on High Street, New Road and St Margaret's Road compared to Main Street pedestrianised without the Inner Relief Road.

- 6.20 The provision of the Inner Relief Road and Main Street pedestrianised would reduce forecast traffic flows on Port Road, south of New Road. An increase is forecast on Port Road with Main Street pedestrianised without the Inner Relief Road.
- 6.21 This option is recommended, and is preferable to Main Street Pedestrianised without the Inner Relief Road. As with the option of the Inner Relief Road in isolation, it is recommended, subject to satisfactory junction designs.

Inner Relief Road + Main Street and Plunkett Street Pedestrianised

- 6.22 Compared to the Main Street and Plunkett Street pedestrianised scheme, the provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would result in similar increased forecast traffic flows on Mission Road, and similar reduced traffic flows on Plunkett Street and College Road. The provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would result in higher reductions in forecast traffic flows on High Street, New Road and St Margaret's Road compared to Main Street and Plunkett Street pedestrianised without the Inner Relief Road.
- 6.23 The provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would reduce forecast traffic flows on Port Road, south of New Road. An increase is forecast on Port Road (South) with Main Street and Plunkett Street pedestrianised without the Inner Relief Road.
- 6.24 It is recommended that this would be implemented in the medium term. It is recommended, subject to satisfactory junctions design, particularly associated with the Inner Relief Road. The proposed improvements at The Hahah would reduce the impact of the increased southbound traffic flow at Mission Road.

7.0 PARKING STRATEGY

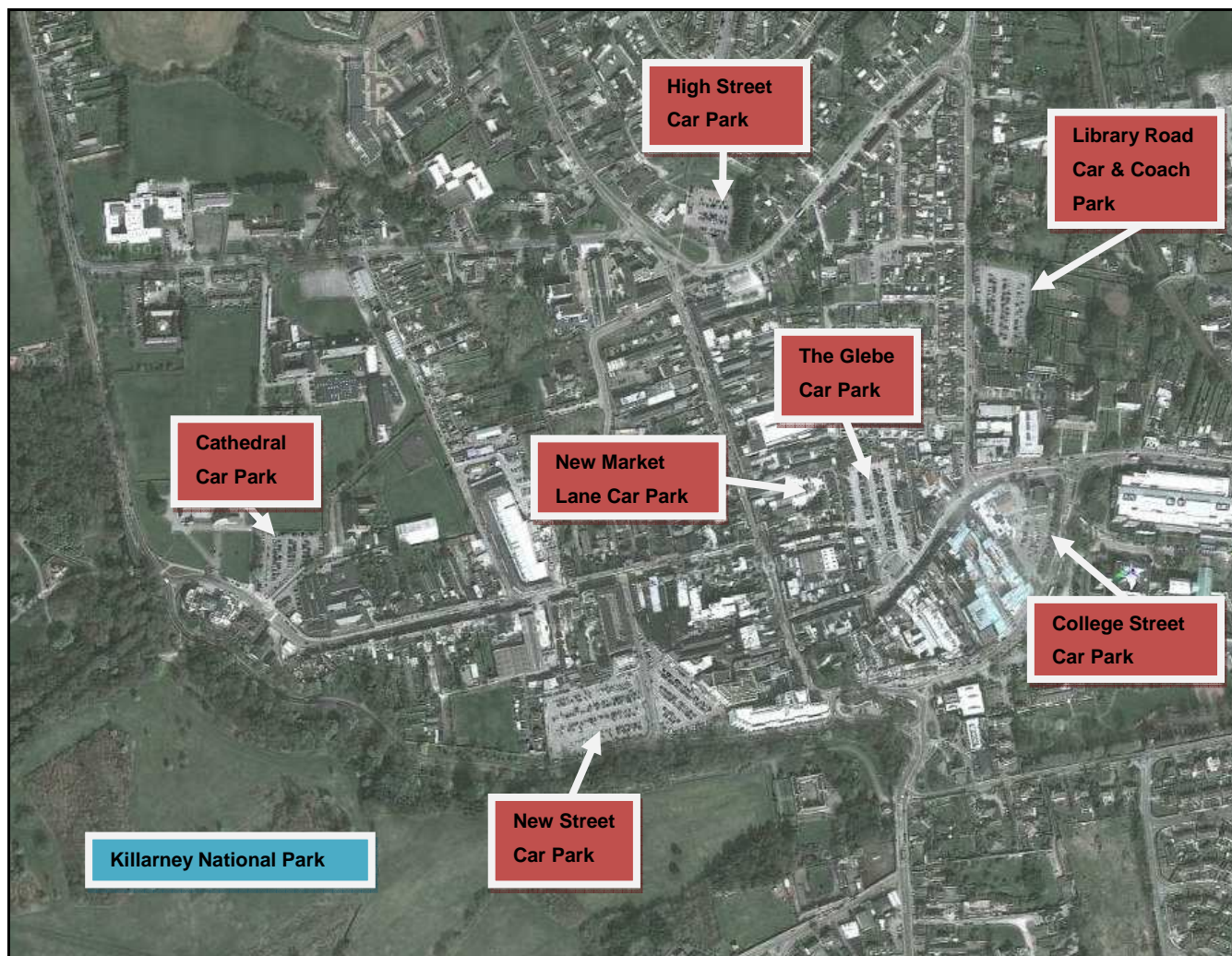


Figure: Town Centre Off-Street Public Parking Locations

General

- 7.1 This overall strategy includes limiting town centre car parking and enhancing provision, and use, of car and coach parking on radial tourist routes to the town. These include Muckross Road, Park Road, Port Road and Rock Road.
- 7.2 Section 5.25 of the *Assessment of Existing Proposed Schemes at Design Stage Report*, contained in Appendix 2, outlines the potential opportunity to provide parking spaces on Muckross Road, south of Ross Road. It is recommended that this should be considered.

- 7.3 It is considered that the existing Bus Éireann car park management, operated by Euro Parks, on Park Road should be amended to increase its utilisation, on a town centre radial route, close to the town centre. It is recommended that associated pedestrian/ cycle access to the town should be enhanced. The existing parking charge structure does not provide for stay duration exceeding three hours. Clamping is indicated to be in force at the car park. The duration and type of enforcement are likely to contribute to the under-utilisation of parking at this key location. As noted below, prohibited parking occurs regularly on the public road between this car park and the town centre. Liaison with the operator would be required.
- 7.4 As outlined in the *Existing Situations Report*, there is significant parking demand adjacent to the Port Road/ Mission Road junction at the entrance to Killarney National Park. It is recommended that parking for cars and coaches should be provided locally to facilitate demand for that destination, and its interaction with the town centre.

New/ Enhanced Parking Areas

- 7.5 New or enhanced parking areas are recommended at the following locations:
- Muckross Road, accessible to Town Centre by Foot/ Bicycle or Shuttle Bus;
 - Port Road, accessible to National Park, and Town Centre by Foot/ Bicycle or Shuttle Bus;
 - Adjacent to the N22 Killarney Bypass, as a Park and Ride facility;
 - Park Road, at the existing Bus Éireann car park, accessible to town centre by foot; and
 - Increase visibility and awareness of the East Avenue private car park, with enhance pedestrian access and connectivity to the town centre.

Multi-storey car park at Beech Road/ New Street

- 7.6 The provision of additional car parking at the existing new street car park was considered and assessed. The provision of a further 300 car parking spaces in the town centre car park was assumed. It is assessed on the basis that this would generate an additional 390 two-way trips during the evening peak hour, and on the basis that these would be additional trips originating external to the town centre. The impact assessment was carried out for a forecast year 2017 PM peak hour scenario.
- 7.7 Key road links in the town centre were analysed. It is predicted that the proposal would result in two-way traffic increases of up to 40% at Beech Road, adjacent to the car park. Other significant changes would include the following:
- Increase of 14% on Port Road, south of New Road;
 - Increase of 14% on St. Anne's road;
 - Increases of 8% at Park Road;
 - Increase of 7% circulating at The Hahah; and
 - Increase of 6% at Muckcross Road.
- 7.8 These locations are within areas of the existing town centre road that are congested during peak times. The resultant increased flows would result in increased queues, commensurate with the increased traffic volumes.
- 7.9 As the overall study recommendations are to provide an enhanced town centre environment, and reduce traffic queuing and delays, the provision of increased town centre parking, including increased parking at New Street Car Park, is not recommended. The recommended methodology for providing additional parking on the periphery of the town centre, with enhanced links to the centre is detailed throughout this report.

Parking Duration/ Charges/ Enforcement (Management)

- 7.10 It is recommended that a parking charge should be applied to the Cathedral Car Park, where free unlimited all-day parking is currently facilitated. This should take a similar structure to the existing charges being implemented at New Market Lane Car Park. This could also assist in facilitating parking demand associated with the adjacent National Park.
- 7.11 The parking charge structure for High Street car park should be amended to raise the parking charge and reduce the permitted maximum stay duration.
- 7.12 Increased parking enforcement and patrolling is recommended to encourage compliance with existing by-laws in place. Issues/locations identified in the *Existing Situations Report* include:
- car parking in the bus set down on the east side of East Avenue Road;
 - parking in restricted clearway area on top (east) end of Plunkett Street;
 - inappropriate vehicle parking on Main Street; parking in restricted areas within the High Street junction area with Main Street/New Street;
 - parking in restricted areas on the south end of Lewis Road, immediately at its College street mini-roundabout junction including on the west side footway;
 - parking by non-electric cars in the spaces at e-car electric charge point within the Lewis Road Car Park; and
 - Parking in restricted areas on both sides at the east end of College Street.
- 7.13 It is recommended that existing Mobility Management Planning and sustainable travel objectives of Kerry County Council for new developments should continue to be implemented, on the basis of applications for new developments, or upgrading of existing developments. This should not be limited to office type development.

- 7.14 Parking standards for new developments in Kerry County Council's Development Plan's require specific provision of quantum of parking spaces. It is recommended that development standards for new Town Centre development should be designated with maximum provision. This would allow Kerry County Council to constrain parking supply, as necessary, with reference to Mobility Management and sustainable travel objectives of Kerry County Council for new developments.
- 7.15 It is recommended that turnover associated with prime town centre parking spaces should be increased, for both on-street and off-street spaces. This should be carried out by increasing parking charges, or reducing permitted parking duration.
- 7.16 It is recommended that parking permits, for use in prime town centre parking areas, should be reallocated to convenient adjacent car park areas.
- 7.17 It is recommended that increased awareness and visibility of existing surface car parks on radial routes into the town should be provided. This would assist in reducing circulating traffic volumes. Increased dissemination of information should take place, as outlined hereunder.

Cycle Parking

- 7.18 There is limited cycle parking facilities for cyclists within the town centre. Dedicated cycle parking facilities are recommended at:
- The National Park at Port Road to facilitate observed demand, not currently facilitated locally;
 - The Glebe Car Park;
 - Main Street; and
 - New or enhanced developments, as required.



Photograph: Cycle Parking

Disabled Driver Parking

- 7.19 The *Existing Situation Report* includes a schedule of existing on-street town centre dedicated disabled driver car parking spaces. The Study recommends retaining existing disabled driver car parking facilities. Additional disabled driver parking spaces requirements would be likely to be informed by public demand via correspondence with the Municipal District, and peak tourist season inventories.
- 7.20 The provision of new disabled driver spaces should, in so far as possible, not conflict with the existing and recommended road network and traffic management.

Bus Parking

- 7.21 The *Existing Situation Report* details existing bus services and facilities, in respect of Bus Éireann, private operators and school buses. Coach set-down/parking is recommended within the provision of a parking facility at Muckcross Road and at the existing privately operated car park adjacent to the Bus Éireann Bus Station on Park Road, adjacent to the town.

- 7.22 It is recommended that the existing dedicated coach parking on East Avenue should be retained, with enforcement of prohibited private car parking in the area.

Taxi Parking

- 7.23 Existing dedicated taxi parking, in the town centre, is provided adjacent to The Glebe Car Park with a vehicle turning facility.
- 7.24 The Study recommended increased pedestrianisation at Main Street and Plunkett Street would improve access from the taxi parking from the town centre.
- 7.25 It is recommended that a small additional Taxi Rank would be provided adjacent to the Killarney Railway Station and Bus Station.
- 7.26 It is recommended that loading bays, located adjacent to the town centre, should be considered for night time use as Taxi Ranks, as appropriate.

Loading Bays

- 7.27 The *Existing Situation* Report includes a schedule of existing on-street loading bays. Loading takes place from within a number of car parks in restricted zones including:
- The Glebe Car park and New Street Car Park;
 - New Street;
 - Beech Road;
 - South End of High Street;
 - West side of Main Street, at its southern end, immediately adjacent to its Plunkett Street junction; and
 - Central median road marking on College Street.
- 7.28 It is recommended that dedicated loading areas would be provided and enforcement of prohibited loading, outside of these areas, would take place.

- 7.29 It is recommended that the existing loading bay/ car park area within New Street car park south of Beech Road should be reconfigured to enhance pedestrian safety in the area. This area should retain the provision of loading areas, within a regularised layout. It is recommended that there would be no new access to New Street Car Park from Mission Road. It is recommended that that bottle bank collections would take place during off-peak times.
- 7.30 It is recommended that access to Main Street would be permitted for loading up to 11.00 am. Enforcement may also be required, subject to the final design of restrictions (i.e. moveable physical restriction).

Motorcycle Parking

- 7.31 Motorcycle parking is included in the recommended layout at Main Street in the medium term. Motorcycle parking is recommended at New Street car park at the recommended reconfigured area to the east, south of Beech Road.

Duration Controls' Pay and Display Charges

- 7.32 An increase in pay and display parking charges would encourage a modal shift to non-car transport and contribute to the achievement of the modal split targets identified in the Government's *Smarter Travel* policy for the period to 2020. This should be considered.

Parking Controls' Enforcement

- 7.33 The enforcement of parking controls is essential for the sustainability of the Study recommended layouts, particularly on footways and cycle lanes.
- 7.34 Existing illegal parking along Main Street, East Avenue, and by delivery vehicles on Main Street and College Street, including on existing footways at all these locations, warrants enforcement of the relevant laws and by-laws by An Garda Síochána and the Municipal District Council, as appropriate.

Information Dissemination

- 7.35 It is recommended that real-time information regarding parking space availability should be provided. This should be easily accessible to the public. Options for making the data available include mobile phone applications, parking websites and tourist websites.

- 7.36 Sensors would be required on the accesses to each car park, as appropriate, in order to provide real-time information. The provision of barriers would require maintenance and may not be desirable.
- 7.37 It is not recommended that Variable Message Signage (VMS) would be provided throughout the town, for aesthetic reasons.

Other

- 7.38 Poor faded road markings and road carriageway surface on College Street at defined on-street parking areas should be renewed.
- 7.39 It is recommended that the implementation of electronic parking payment should be considered. This would allow drivers to pay for parking using electronic methods such as by mobile phone. Some systems allow users to park again without returning to their car, or to be alerted via a reminder in advance of their ticket expiration.

8.0 FACILITIES FOR VULNERABLE USERS

Pedestrians

- 8.1 The existing controlled crossing facilities for pedestrians, on existing streets and roads, include Pelican crossings, Zebra crossings and traffic signal controlled junctions with pedestrian crossing phases.
- 8.2 It is recommended that a detailed accessibility audit of facilities for vulnerable users, including tactile facilities should be carried out for the town centre. Footways at accesses, including private entrance such as hotels, should be enhanced via the provision of raised crossings with clear pedestrian priority, throughout the urban area, particularly in the town centre. This would reduce the need for additional dedicated controlled crossings within the town. An example is the recently improved Fairfield car park access from East Avenue. Uncontrolled (yellow) tactile paving is provided on the footway on the north side of the access only without corresponding tactile to the south side. Tactile paving indicates priority to vehicles over pedestrians at the access. If tactile paving is provided, it should be provided at both side of the crossing.
- 8.3 Road layout and junction improvements are recommended at a number of locations, and incorporate a number of uncontrolled facilities. These would improve safety for vulnerable users.
- 8.4 Pedestrian enhancement measures are proposed at High Street, Main Street and Plunkett Street. These include pedestrian priority measures, reduced lane widths, and more restrictive junction geometry. These are recommended in the short term. Details of the proposals at High Street and Plunkett Street are outlined in Sections 2.0 and 3.0 respectively of the *Assessment of Existing Proposed Schemes at Design Stage* Report, provided in Appendix 2 of this Report.

- 8.5 It is recommended that pedestrianisation and pedestrian priority areas should be introduced to the town centre. These could be introduced on a phased basis and include:
- Main Street;
 - Plunkett Street; and
 - Kenmare Place.
- 8.6 The proposed measures would reduce typical speeds during off peak times, and would self enforce the design speed of their applied geometries.

Cyclists

- 8.7 There are limited dedicated facilities, for cyclists, within the Study Area urban area. As outlined previously, it is a policy of Kerry County Council to apply the policies outlined in the Governments Smarter Travel – A Sustainable Transport Future publication.
- 8.8 It is recommended that a cycle strategy should be implemented in the town. It is recommended that future planning permissions and Development Plans would take cognisance of the strategy which includes for the provision of cycle parking and associated facilities within new developments.

Jarveys

- 8.9 It is recommended that there would be no increase in licences for Jarveys. It would be desirable to relocate the town centre Jarvey base away from The Hahah to improve traffic circulation around the town. The option of relocating the base to an alternative location, adjacent to the town, with regulated access and egress from the public road should be considered. Appropriate pedestrian connectivity to the town would be required.



Photograph: Jarveys at The Hahah

Development Lead Initiatives

- 8.10 It is recommended that Mobility Management Plans would be required for new and upgraded developments, requiring cyclist facilities, to include bicycle and motorbike storage areas, showers, and lockers for equipment. Awareness of schemes such as the Government's *Cycle to Work Scheme* should be promoted. The Smarter Travel Report carried out as part of this study outlines further initiatives.

Other Users

- 8.11 It is recommended that, where required, disabled driver car parking spaces should be retained, or relocated if necessary.
- 8.12 Tactile blistered paving, for the visually impaired, is provided at many pedestrian crossing locations, on the existing road and street network, throughout the Study Area. It is recommended that any future works would provide these facilities, generally in accordance with the current *Traffic Management Guidelines*.

- 8.13 There are limited parking facilities for motorcycles within the town centre area. It is recommended that dedicated motorcycle parking would be provided at suitable locations.
- 8.14 It is recommended that vehicular access to Main Street and Plunkett Street would be limited. This should not prohibit access for cyclists.

9.0 PUBLIC TRANSPORT

Transport Hub

9.1 A transport hub, or transport interchange, is a location at which more than one transport mode is available. This allows for the transfer of people, or goods, from one mode to another. These modes may include:

- Walking;
- Cycling;
- Bus/ Coach;
- Private car;
- Taxi;
- Motorcycle; and
- Rail or Tram.

TRANSPORT HUB

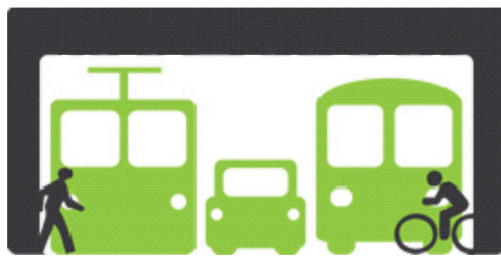


Figure: Transport Hub Logo

9.2 It is recommended that a transport hub which would be located at, or near the Railway Station, and that high quality pedestrian links would be provided, between the Hub and the town centre, to reduce town centre bus and taxi movements. It is recommended that the option of providing a direct link between the Railway Station and Bus Station would be provided.

Bus Éireann and Private Bus Operators

9.3 It is recommended that consultation should take place with Bus Éireann to support the proposed Transport Hub.

Iarnród Éireann

- 9.4 Iarnród Éireann's Killarney Train Station is located at East Avenue, adjacent to the town centre, and the Bus Éireann bus station. It is recommended that a Transport hub, for the town, should be provided adjacent to the Station. It is recommended that improved pedestrian links to the town centre should be provided via the existing urban street network, with enhancements as recommended in this strategy.
- 9.5 The Transport Hub should be well served with cycling facilities, and should include end destination facilities, including cycle parking. It is recommended that consultation should take place with Iarnród Éireann and other coach operators to support the proposed Transport Hub.

Taxis and Hackneys

- 9.6 It is recommended that a taxi rank should be considered adjacent on Park Road, adjacent to Bus Éireann's Terminal and the Killarney Outlet Centre.

Cycle Parking

- 9.7 It is recommended that high quality sheltered bicycle parking should be provided adjacent to the Bus Éireann Terminal.

GLOSSARY AND ACRONYMS

DMRB	TII Design Manual for Roads and Bridges
DMURS	Design Manual for Urban Roads and Streets
DTTAS	Department of Transport Tourism and Sport
NRA	National Roads Authority
OSCADY	Optimised Signal CAPacity and DelaY (computer programme for calculating signal timings and estimates of traffic signals.)
PICADY	Priority Intersection CAPacity and DelaY (computer programme for calculating estimates of the capacity of major/minor road junctions, where the minor road is controlled by a stop or yield sign.)
SATURN	Simulation and Assignment of Traffic to Urban Road Networks (suite of flexible network analysis programs developed at the Institute for Transport Studies, University of Leeds and distributed by WS Atkins of Epsom since 1981.)
TII	Transport Infrastructure Ireland
UK DMRB	UK Design Manual for Road and Bridges
V/C	Volume to Capacity Ratio

Kerry County Council's Kerry County Development Plan 2015 – 2021

Kerry County Council's Killarney Town Development Plan 2009 – 2015

Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020

Technical Advice Note TA79/99, Traffic Capacity of Urban Roads UK DMRB

TRL (UK company TRL). TRL's issues computer software programmes PICADY and OSCADY

APPENDIX 1 - Existing Situation Report

Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | Limerick | London

**Kerry County Council and
Killarney Municipal District**

**Killarney Town Traffic
Model/Traffic Management Study**

Existing Situation Report

Project No.: 16925
Document No.: 6001/Rev.B
Date: October 2015

Kerry County Council and Killarney Municipal District

Killarney Town Traffic Model/Traffic Management Study

Existing Situation Report

Project No.	Doc. No.	Rev.	Date	Prepared By	Checked By	Approved By	Status
16925	6001	A	27.10.2015	S Quigley	C O'Callaghan	J O Leary	Draft
16925	6001	B	31.05.2016	C O'Callaghan	S Quigley	J O Leary	Final

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Malachy Walsh and Partners
Engineering and Environmental Consultants

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1.0 INTRODUCTION

Appointment

- 1.1 In September 2015, Kerry County Council and Killarney Municipal District appointed Malachy Walsh and Partners to carry out their Killarney Town Traffic Model/Traffic Management Study.

Brief

- 1.2 Kerry County Council and Killarney Municipal District's Brief for the Killarney Town Traffic Model/Traffic Management Study identified the aim of the study as *"a review of the transportation network and the associated demands with particular attention to the town centre area with the objective of determining the impact of proposed infrastructural measures to cope with the existing and future vehicular, pedestrian and cyclist traffic volumes"*.

Existing Situation Report

- 1.3 The key deliverables of the Study, identified by the Brief, include an Existing Situation Report.
- 1.4 The Study Brief for the Existing Situation Report stated that *"The Study will investigate and report upon the current situation in Killarney Town and Environs, to include:*
- *Current land use;*
 - *Proposed development zoning;*
 - *Proposed development sites;*
 - *Existing road and street network;*
 - *Existing traffic flow;*
 - *Existing facilities for pedestrians;*
 - *Existing facilities for cyclists;*
 - *Existing access to schools;*
 - *Existing town centre parking;*
 - *Existing movement of goods vehicles;*
 - *Current public transport facilities.*

- 1.5 This draft Existing Situation Report is for consultation with, and consideration by, Kerry County Council and Killarney Municipal District.

Methodology

- 1.6 This Existing Situation Report has been prepared on the basis of the following:
- Weekday evening peak period on-site traffic surveys, carried out by Kerry County Council and Killarney Municipal District, during late August and early September 2015;
 - A consultation meeting with Kerry County Council and Killarney Municipal District on the 4th September 2015;
 - On-site inventories of existing facilities and observations of existing operations, by Malachy Walsh and Partners, in September and October 2015; and
 - A desktop review of the Kerry County Development Plan 2015 – 2021.

2.0 EXISTING ROAD AND STREET NETWORK

Town Centre

- 2.1 The existing town centre street network is shown on Figure 1, and comprises a main south/north street network along Kenmare Place, Main Street and High Street, with main adjoining streets, including New Street on the west side, and Plunkett Street, College Street and East Avenue, on the east side.
- 2.2 The town centre road network is shown on Figure 2, and the town road network is shown in Figures 3 and 4.
- 2.3 The existing town centre junction traffic management includes the following:
- A one-way loop roundabout system at the Hahah, at the intersection of Kenmare Place, East Avenue Road, Muckcross Road and Mission Road;
 - Traffic signals at the High Street/St Anne's Road/High Street Car Park Access junction;
 - Traffic signal junctions on the south side of the town centre at the Muckcross Road/Ross Road and Muckcross Road/ Woodlawn Road junctions;
 - Mini-roundabouts at the College Street/Lewis Road junction and Muckcross Road/Countess Road junction;
 - A roundabout at the College Street/East Avenue Road junction; and
 - Elsewhere, priority controlled junctions throughout the town centre, including many with yellow-box clearway road markings.
- 2.4 College Street and Plunkett Street are one-way westbound from the exit from The Glebe Car Park. Main Street and High Street are one-way northbound, from Plunkett Street to Msgr. O'Flaherty Road. Bohreen Na Goun is one-way northbound, between its Dunnes Stores' access and New Road junctions.
- 2.5 Killarney town centre has an extensive series of pedestrian lanes that link the main town centre streets and car parks.

Town Centre Radial Routes

2.6 The main town centre radial routes include the following:

- The R876 Park Road, which extends east from its roundabout junction with College Street/East Avenue Road, to the N22 Park Road Roundabout on the N22 Killarney Bypass Road;
- The N71 Muckross Road, which extends south from The Hahah one-way loop roundabout system;
- The N71 Mission Road, which extends west and then north from The Hahah one-way loop roundabout system, to link with the N71 Port Road, which continues north to the N72 Ballydowney Roundabout, on Dr. Hans Liebherr Road;
- Rock Road, which extends north from its traffic signals junction with New Road, to the N22/N72 Cleeny Roundabout on the N22 Killarney Bypass Road; and
- Lewis Road, which extends north from its mini-roundabout junction with College Street, to the St Anne's Road/Upper Lewis Road Roundabout. Upper Lewis Road continues north to its priority junction with the N22 Killarney Bypass Road.

Town Distributor Routes

2.7 The main town distributor routes that link with the main town centre radial routes include the following:

- The L3904 Countess Road, which extends east from its mini-roundabout junction with Muckross Road, to its roundabout junction with Park Road and Arbutus Drive;
- Woodlawn Road, which extends east from its traffic signals junction with Muckross Road, to its priority junction with Rookery Road and Ballycasheen Road. The L3907 Ballycasheen Road continues east to its priority junction with the N22, on the east side of Killarney;
- Rookery Road links Countess Road and Woodlawn Road/Ballycasheen Road;
- New Road, which extends west from its traffic signals junction with Rock Road, to its priority junction with Port Road;
- Arbutus Drive, which extends north from its roundabout junction with Park Road and Countess Road; and

- Ross Road, which extends south west from its traffic signals junction with Muckcross Road.

N22 Killarney Bypass Road

2.8 The N22 Killarney Bypass Road extends from the N22 Park Road Roundabout ('Daly's'), on the east side of Killarney, to the N22/N72 Cleeny Roundabout, on the north west side of Killarney, along the east and north of Killarney. The N22 Killarney Bypass Road is a single carriageway suburban and rural road, and forms the following at-grade junctions:

- Roundabout junctions with the R876 Park Road/Upper Park Road, L3010 Woodlands Industrial Estate Road/Killarney Sports and Leisure Centre Access Road and N22 Tralee Road/N72 Dr. Hans Liebherr Road; and
- Priority controlled T-junctions with Woodlands Road, the Fire Station access, Upper Lewis Road and Kilcummin Road.

National Roads

2.9 The N22 National Primary Road extends from the N40 Cork Southern Ring Road at Cork City, in the east, to Tralee, in the west, via the Killarney Bypass Road. The N71 National Secondary Road extends from the N40 Cork Southern Ring Road at Cork City, to Killarney, via Kenmare. The western section of the N72 National Secondary Road extends from Killarney to Killorglin, in the west.

Figure 1 – Town Centre Street Network

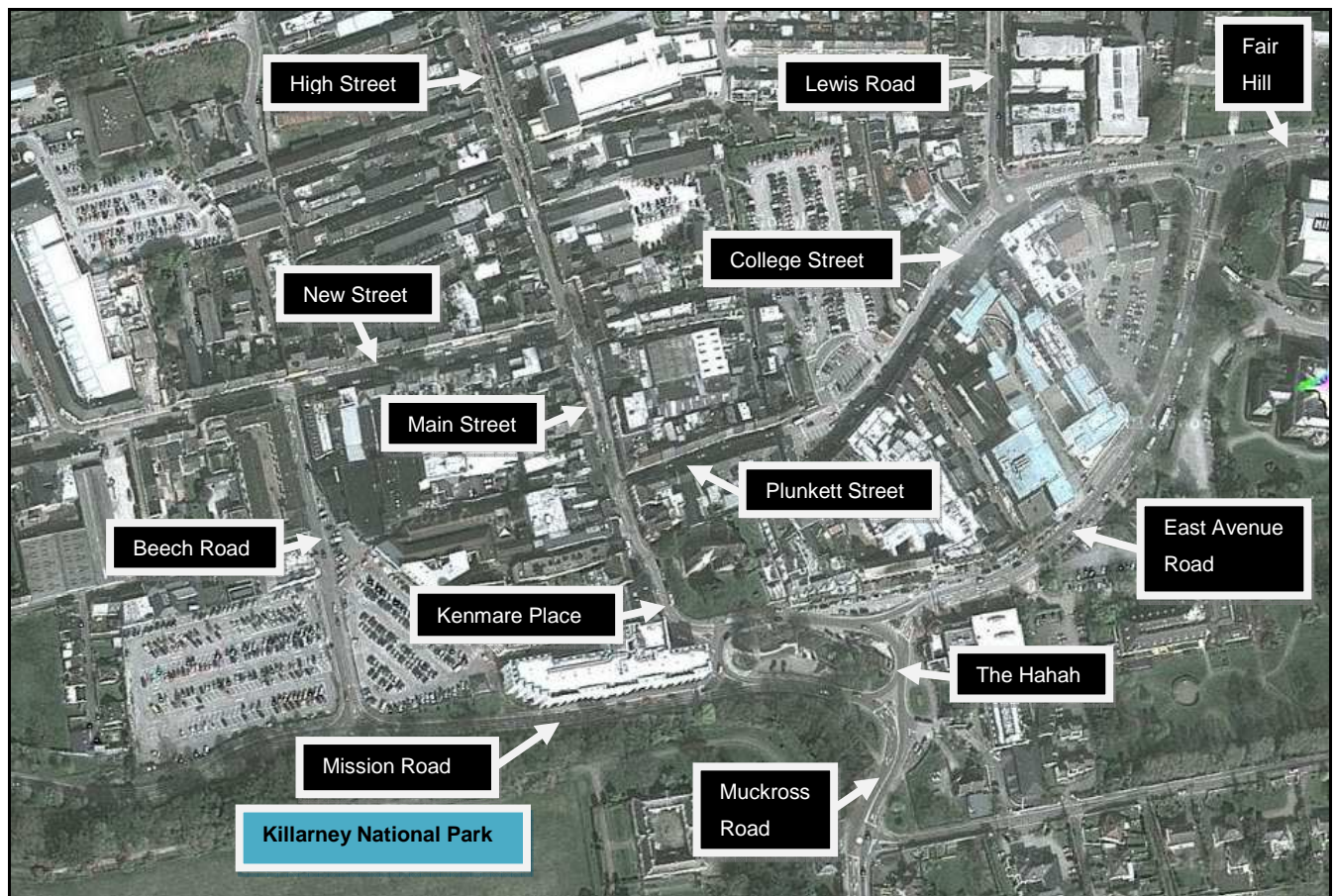


Figure 2 – Town Centre Road Network

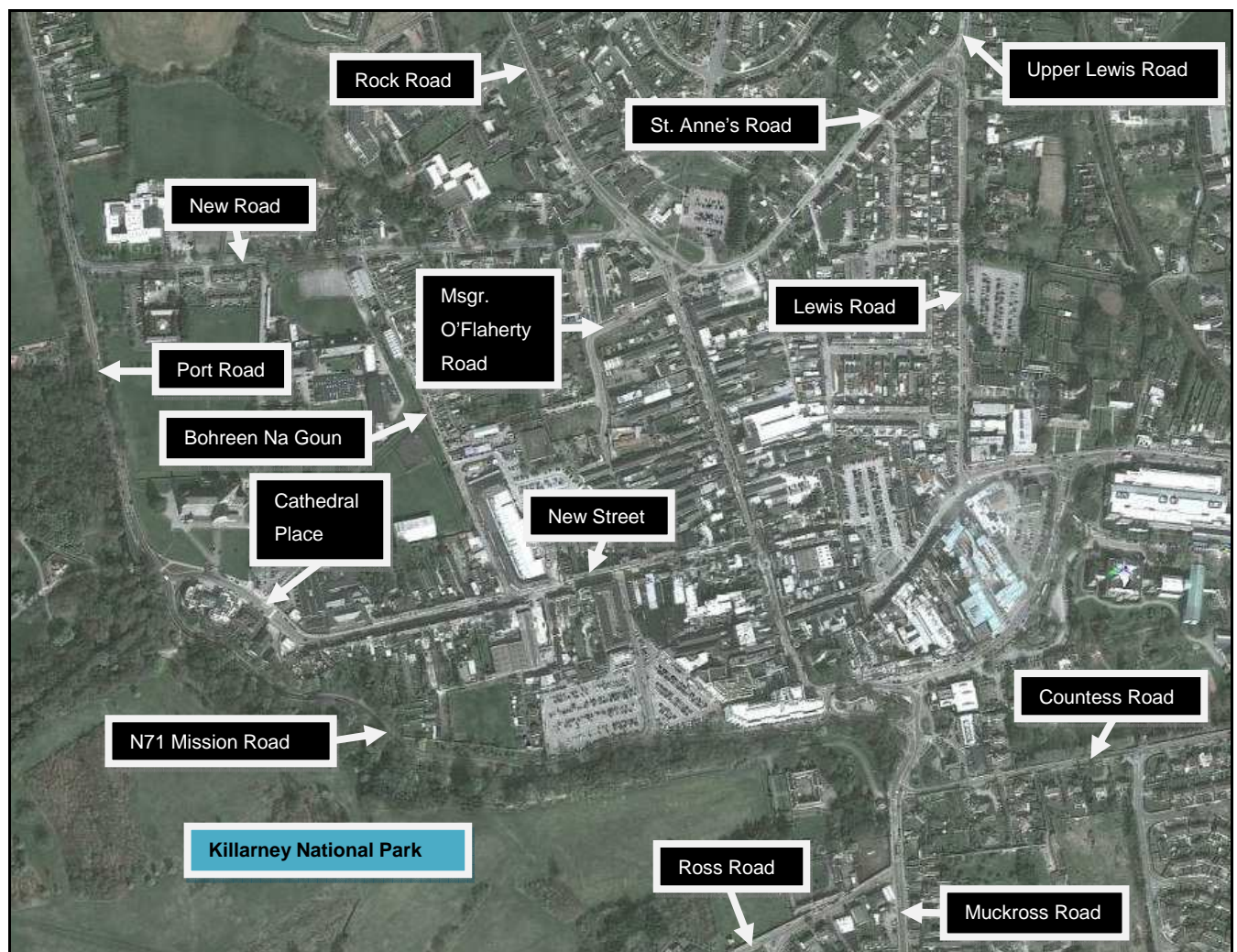


Figure 3 – Town Road Network (1 of 2)

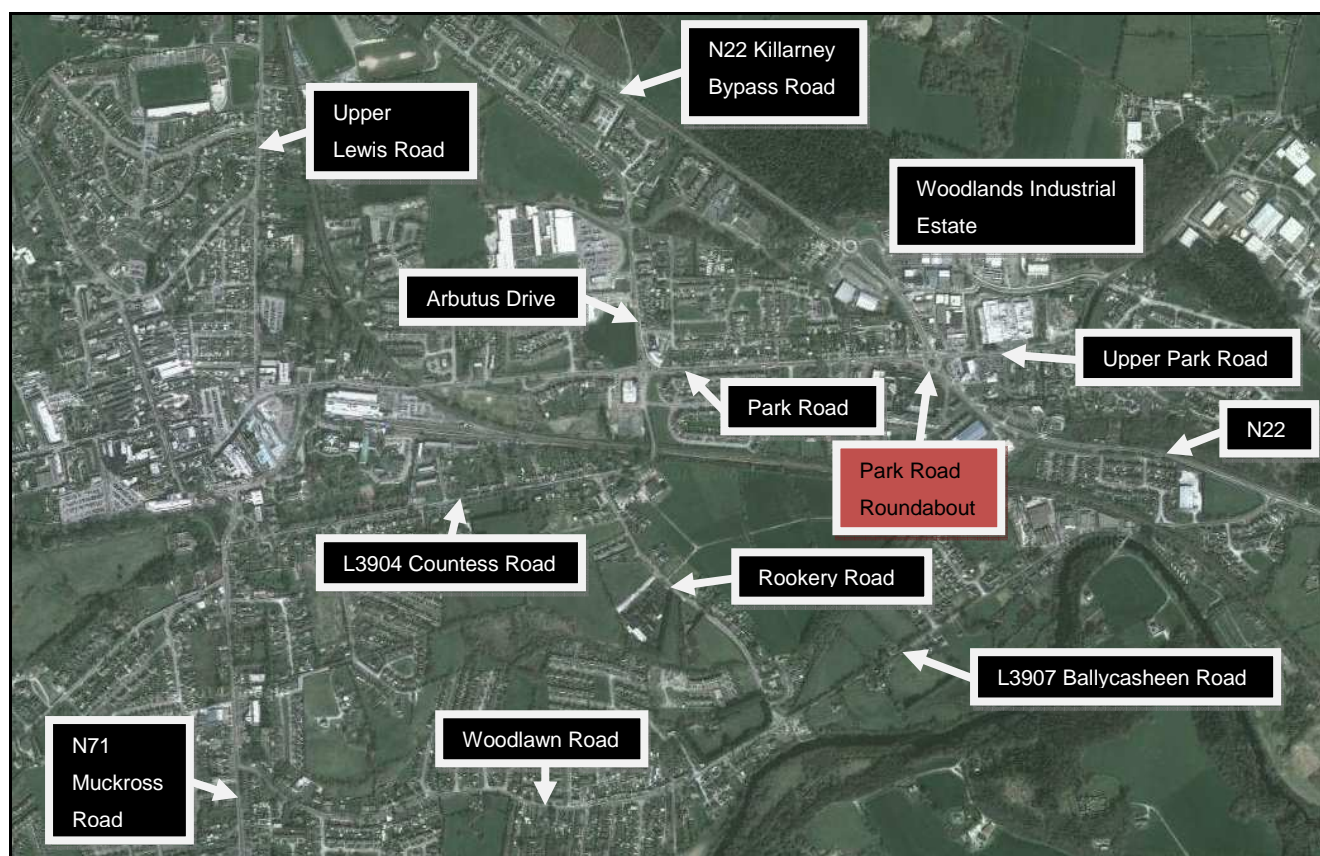
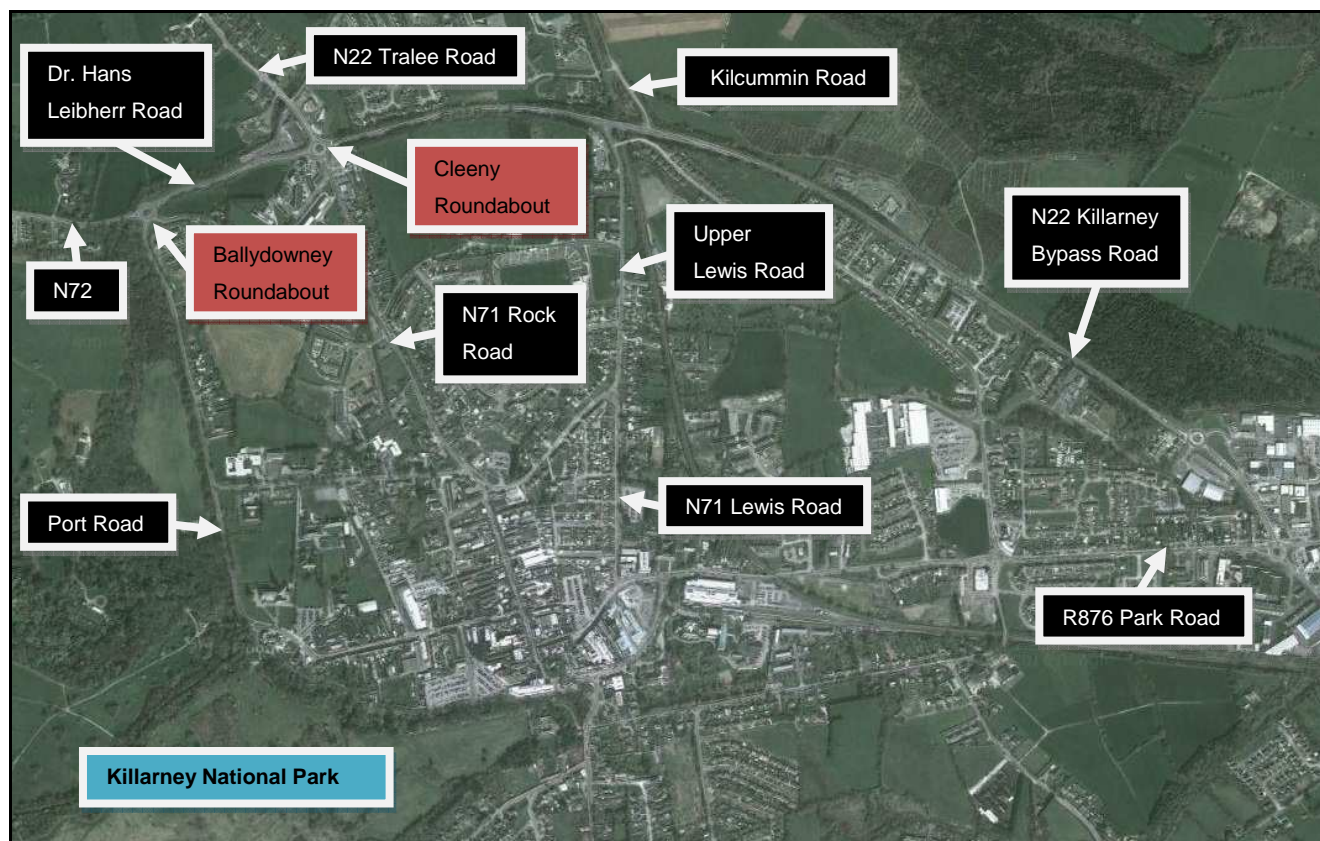


Figure 4 – Town Road Network (2 of 2)



3.0 EXISTING PLANNING

Land Use and Zoning

- 3.1 The existing Study Area land use and zoning is defined in the Kerry County Development Plan 2015 – 2021. The County Development Plan indicates that the settlement hierarchy for County Kerry includes Killarney as one of two Hub Towns, defined as *“key destination, economically active supporting surrounding area, located on multi-modal transportation corridor”*.

Projected Populations

- 3.2 The Kerry County Development Plan identifies a total population growth target for the period 2015 to 2021, for the Killarney Municipal District, of 2,525 persons. The existing Killarney Municipal District population is approximately 38,040 persons. The Development Plan population growth targets envisage that 1,781 persons of the target increase for Killarney Municipal District would occur in Killarney Town. This would increase the existing Killarney Town population by approximately 14%, from approximately 12,740 persons, to 14,521 persons, by 2021.

4.0 EXISTING TRAFFIC VOLUMES

Peak Hour Traffic Volumes

- 4.1 On-site weekday evening peak hour traffic counts were carried out by Kerry County Council and Killarney Municipal District, for the Killarney Town Traffic Model/Traffic Management Study, during late August and early September 2015. The total recorded two-way link peak hour vehicles are shown on Figure 5, for the town centre, and on Figures 6 and 7, for the town road network located outside the town centre.

Town Centre Traffic Volumes

- 4.2 The highest two-way peak hour traffic volumes, within the town centre, were recorded on College Street at 1,334 vehicles. Elsewhere within the town centre, highest peak hour traffic volumes were recorded on Fair Hill, East Avenue Road and Mission Road, with two-way volumes of 1,253 vehicles, 1,186 vehicles and 1,092 vehicles, respectively.
- 4.3 On town centre one-way streets, highest peak hour traffic volumes were recorded on Main Street, High Street and Plunkett Street, with volumes of 569 vehicles, 537 vehicles and 407 vehicles, respectively.

Traffic Volumes on Town Centre Radial Routes

- 4.4 On the basis of the traffic data to date, the highest two-way peak hour traffic volumes on town centre radial routes were recorded on Rock Road, at the N22 Cleeny Roundabout, at 1,544 vehicles. Highest recorded two-way volumes on other radial routes were 1,253 vehicles on Fair Hill, 1,067 vehicles on Muckcross Road and 965 vehicles on Lewis Road.

Town Distributor Routes

- 4.5 The highest recorded two-way peak hour traffic volumes on town distributor routes that link with the main town centre radial routes, on the basis of the traffic data to date, were 776 vehicles on Countess Road, 730 vehicles on St. Anne's Road and 703 vehicles on Ross Road.

N22 Killarney Bypass Road

- 4.6 The highest recorded two-way peak hour traffic volumes on the N22 Killarney Bypass Road were 1,406 vehicles at the Cleeny Roundabout junction. The traffic data to date does not include a traffic count at the N22 Park Road Roundabout junction.

Pedal Cycle Volumes

- 4.7 During the on-site traffic counts, relatively high pedal cycle volumes were recorded on designated leisure/tourist cycle routes, including Muckross Road, The Hahah, Mission Road and Dr. Hans Leibherr Road. A total peak hour two-way pedal cycle volume of 64 pedal cycles was recorded on Muckross Road. Other highest recorded peak hour cycle volumes included 46 pedal cycles on The Hahah, 29 cycles on Mission Road and 20 cycles on Dr. Hans Leibherr Road.
- 4.8 Elsewhere, 17 peak hour pedal cycles were recorded on College Street and East Avenue Road, 16 cycles on Fair Hill, 15 cycles on Kenmare Place and 14 cycles on Plunkett Street. North of the Cleeny Roundabout, a total of 12 peak hour pedal cycles were recorded on the N22 Tralee Road.

Traffic Congestion

On-Site Observations

- 4.9 During the on-site inventories of operations, traffic delays, conflict and congestion was observed within the town centre, during peak traffic periods, at the following locations:
- The Hahah one-way loop roundabout, at the exit from the Jaunting Cars (Jarveys) Station. Slow exiting jaunting cars (jarveys) were observed crossing two-lanes of one-way westbound traffic to Mission Road;
 - The Hahah one-way loop roundabout, at the Mission Road eastbound entry. Left-turn vehicles on the left (inner) lane from Muckross Road onto The Hahah one-way loop roundabout were observed weaving (changing) to the outer (right) lane to follow the loop system. Vehicles entering the one-way loop roundabout from Mission Road were observed misjudging the entry gap acceptance. Significant delays during peak season;
 - Proximity of High Street/Msgr. O'Flaherty Road priority junction and High Street/St. Anne's Road traffic signals junction, with different junction controls, and signal heads visible from both junctions. Delays on approaches;

- The Plunkett Street right-turn onto Main Street was observed restricted by inappropriate parking on Main Street and by the position of the defined restricted width right-turn approach lane on Plunkett Street, and associated resultant turning radius; and
- Vehicles delayed on Mission Road by slow moving jaunting cars (jarveys) and resultant overtaking manoeuvres.

Consultations

4.10 It is understood that traffic delays and congestion occurs on the N22 and the N22 Killarney Bypass Road, including at the following locations:

- At the N22 Park Road Roundabout, on the N22 Cork Road, and Upper Park Road. Vehicles on the Cork Road approach use the right-turn lane to travel fully around the Roundabout to travel straight-on along the N22;
- At the N22 Park Road Roundabout eastbound extending back to the N22 Leisure Centre Roundabout;
- At the N22 Cleeny Roundabout, on the N22 Tralee Road approach. Traffic delays and congestion on this approach has been reduced by the recent upgrading works; and
- At the N22 Cleeny Roundabout, on the Rock Road approach, during the evening peak period, due to a high volume of opposing traffic volumes on the Roundabout entry.

Figure 5 – Recorded Town Centre Peak Hour Traffic Volumes (Vehicles)

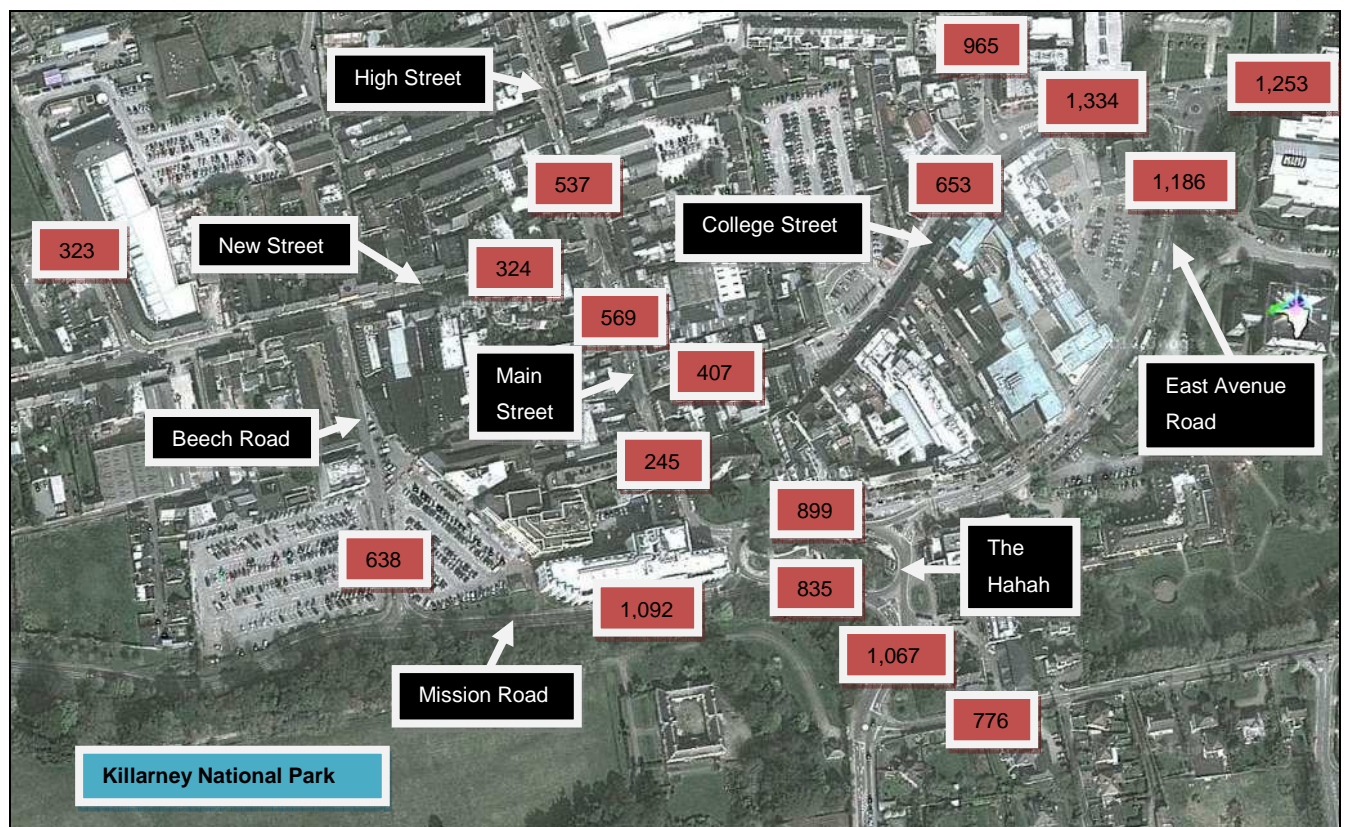


Figure 6 – Recorded Town Road Network (1 of 2) Peak Hour Vehicles

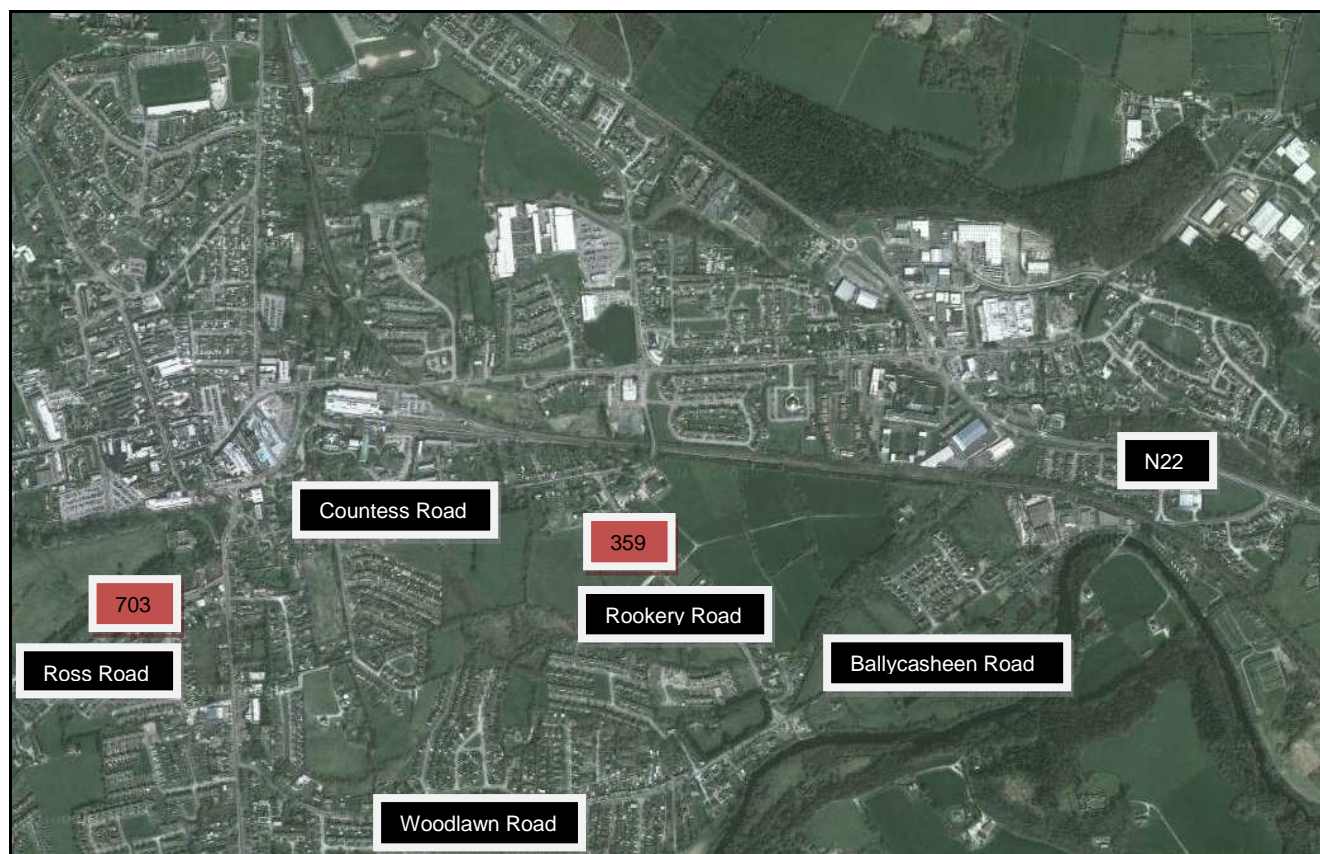


Figure 7 – Recorded Town Road Network (2 of 2) Peak Hour Vehicles



5.0 EXISTING TOWN CENTRE PARKING

Town Centre Parking Inventory

- 5.1 An inventory of existing town centre on-street parking controls and off-street public car parks was carried out by Malachy Walsh and Partners on the 14th October 2015. The inventory of existing town centre parking controls included maximum permitted parking durations, permitted off-street public parking supply, disabled drivers' parking, commercial loading bays, cycle parking bays, taxi parking and bus parking and set-down.
- 5.2 Convenient pay and display on-street and off-street parking is provided, by Kerry County Council and Killarney Municipal District, throughout the town centre. Parking controls and charges for town centre on-street and off-street locations are broadly consistent, for users and visitors.

Town Centre Parking Data

- 5.3 Kerry County Council carried out car parking surveys during August 2015. This data was provided for the Study.

Town Centre Off-Street Public Parking

- 5.4 The town centre off-street public parking locations are shown in Figure 8. A summary of town centre off-street public parking is provided in Table 1. Off-street car parks are located within convenient walking distances of the main town centre streets, and off-street parking is directly accessible from all town centre radial and distributor roads.
- 5.5 Parking at the New Street Car Park, The Glebe Car Park and Fairhill Car Park is on the basis of pay and display at €1/hour, for each hour parked. Parking at the High Street Car Park and Lewis Road Car Park is charged on the basis of €0.60 for the first two hours and €0.60/hour thereafter, pay and display. Car parking at the Lewis Road Car Park is also available at €3/day.
- 5.6 Off-street pay and display private parking at the New Market Lane Car Park, located off High Street, is €1/hour and €5/day. Weekly and monthly rates are also available.

- 5.7 Free off-street car parking, convenient to the town centre, is provided at the Cathedral Car Park, located at the west end of New Street.

Table 1 – Summary of Town Centre Off-Street Public Parking

Location	Total Car Parking Spaces	Disabled Spaces	Cycle Parking	Coach/Bus Parking Spaces	Parking Charges/Controls
New Street Car Park East	126	7	Cycle Bay		€1/hour
New Street Car Park West	315				€1/hour
New Market Lane Car Park	30				€1/hour; €5/day; €18/week; €65/month.
High Street Car Park	122	5	Cycle Bay		€0.60/1 st & 2 nd hour; €0.60/hour thereafter.
Cathedral Car Park	150				Free. Overnight parking prohibited.
The Glebe Car Park	206	3			€1/hour
Fairhill Car Park	112	2	Cycle Bay		€1/hour
Lewis Road Car Park	142	4	Cycle Bay		€0.60/1 st & 2 nd hour; €0.60/hour thereafter; €3/day.
Lewis Road Coach/Bus Park				25	Barrier controlled access.

Disabled Driver Parking

- 5.8 Dedicated off-street disabled driver parking spaces are provided, by Kerry County Council and Killarney Municipal District, in the New Street Car Park, High Street Car Park, The Glebe Car Park, Fairhill Car Park and Lewis Road Car Park.

Coach/Bus Parking

- 5.9 Barrier controlled off-street parking for coaches and buses is provided, by Kerry County Council and Killarney Municipal District, at the Lewis Road Coach/Bus Park, with 25 dedicated spaces.

Cycle Bay Parking

- 5.10 Dedicated off-street cycle bay parking is provided, by Kerry County Council and Killarney Municipal District, within New Street Car Park, High Street Car Park, Fairhill Car Park and Lewis Road Car Park.

Town Centre On-Street Public Parking

- 5.11 A summary of town centre permitted on-street public parking is provided in Table 2.

Table 2 – Summary of Town Centre Permitted On-Street Public Parking

Street	Permitted Parking	Parking Controls		
		Maximum Duration	Charges	Controls
New Street	South side	1 hour	20 minutes €0.50 or 1 hour €1.50	Pay & display and permit. Monday to Saturday 08:30 to 18:30.
Cathedral Place	South side			
Bohren Na Goun	East side			
High Street	Both sides			
St. Anne's Road/Rock Road	West side locally at High Street junction			
New Road	Both sides locally			
College Street	Both sides			
St. Anthony's Place	Both sides			
East Avenue Road	Both sides locally			
Muckcross Road	Both sides locally			
Port Road	West side	2 hours	Free	

- 5.12 Permitted pay and display on-street parking throughout the town centre is provided by Kerry County Council and Killarney Municipal District, with a one hour maximum duration, at rates of €0.50 for 20 minutes or €1.50 for one hour. Free on-street parking, for up to two hours, is provided on the west side of Port Road.

Disabled Driver Parking

- 5.13 A schedule of on-street town centre dedicated disabled driver car parking spaces, provided by Kerry County Council and Killarney Municipal District, is provided in Table 3.

Table 3 – Schedule of On-Street Town Centre Disabled Driver Parking Spaces

Street	Disabled Driver Parking Spaces	
	Number	Location
Beech Road	1	East side
New Street	2	South side, west of Beech Road junction.
	5	South side, east of Beech Road junction.
High Street	2	West side
	1	East side
Kenmare Place	1	West side
College Street	1	North side, west of Lewis Road junction
	1	South side, east of Lewis Road junction
Fair Hill	2	North side, west end
East Avenue Road	2	North side at The Hahah

On-Site Observations

- 5.14 During the on-site inventories, the following parking operations were observed:
- Significant overflow parking within the Cathedral Car Park and on Cathedral Place;
 - No cycle bay parking in The Glebe Car Park;
 - Restricted access for pedestrians to the single pay station within Fairhill Car Park, due to Council work vehicles parked on clearways;
 - Parking in restricted areas within Fairhill Car Park in the vicinity of its College Street access;
 - Parking in restricted areas on Port Road, north of the defined permitted and on the west side footway;
 - Parking in restricted areas on Port Road at the entrance to Killarney National Park;
 - Poor faded road markings and road carriageway surface on College Street at defined on-street parking areas;
 - Car parking in the bus set down on the east side of East Avenue Road;

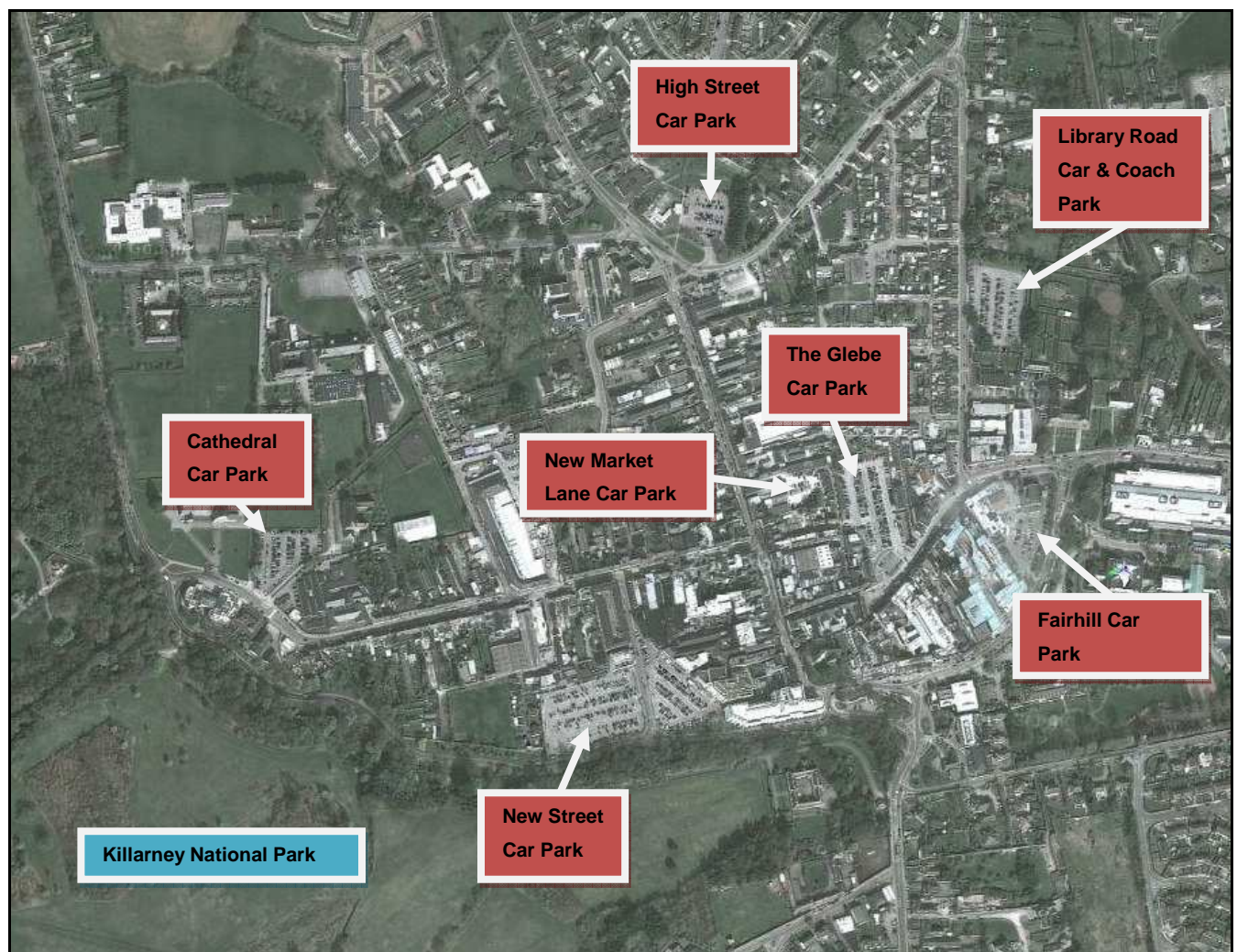
- Parking in restricted clearway area on top (east) end of Plunkett Street;
- Inappropriate vehicle parking on Main Street;
- Parking in restricted areas within the High Street junction area with Main Street/New Street;
- Parking in restricted areas on the south end of Lewis Road, immediately at its College street mini-roundabout junction, including on the west side footway;
- Parking by non-electric cars in the spaces at e-car electric charge point within the Lewis Road Car Park; and
- Parking in restricted areas on both sides at the east end of College Street.

Other/ Private Car Park Location

5.15 There is a significant amount of privately operated car publicly accessible parking in Killarney. These include include:

- DeerPark Shopping Park, including Tesco;
- Killarney Outlet Centre;
- Killarney Train Station;
- The Malton;
- Scott's Street;
- Penney's;
- Dunnes Stores;
- Milk Market Lane; and
- Hilliard House Car Park.

Figure 8 – Town Centre Off-Street Public Parking Locations



6.0 EXISTING FACILITIES FOR VULNERABLE USERS

Pedestrians

- 6.1 The controlled crossing facilities for pedestrians, on existing streets and roads, include Pelican crossings, Zebra crossings and traffic signal controlled junctions with pedestrian crossing phases.
- 6.2 Existing town centre crossing facilities for pedestrians include the following:
- Pelican crossings on Main Street, Port Road south of its New Road junction, New Street west of its Beech Road junction, East Avenue Road between its College Street and Killarney Railway Station Access junctions, East Avenue Road east of The Hahah, on the north side of The Hahah east of Kenmare Place, Lewis Road south of the Lewis Road Car and Coach/Bus Park;
 - Zebra crossings on Rock Road north of its New Road junction, New Road at Holy Cross Mercy School, Port Road at its Cathedral Place junction, New Street at St. Brigid's Secondary School, Mission Road at Kenmare Place and The Hahah; and
 - Pedestrian crossing phases at the traffic signal controls at the High Street/St. Anne's Road/High Street Car Park Access junction.
- 6.3 Pedestrian crossing phases at the traffic signal junctions on the south side of the town centre at the Muckross Road/Ross Road and Muckross Road/ Woodlawn Road junctions.
- 6.4 Existing crossing facilities for pedestrians on town centre radial routes include the following:
- Zebra crossing on Countess Road west of Rookery Road junction;
 - Pelican crossings at two locations on Park Road;
 - Pelican crossing on Arbutus Drive;
 - Pelican crossing on Upper Park Road;
 - Pelican crossing on the N22 Cork Road, south east of its Park Road Roundabout junction;
 - Zebra crossing on the N22 Killarney Bypass Road, north west of its Park Road Roundabout junction; and

- Controlled pedestrian crossings in the vicinity of the N22 Cleeny Roundabout, including a zebra crossing on the N22 Tralee Road and Pelican crossings on the N72 Dr. Hans Leibherr Road and Rock Road.

6.5 There are a series of pedestrian lanes within the town centre that include pedestrian links with Kenmare Place, Main Street, High Street, Msgr. O'Flaherty Road, New Street, New Road, College Street, New Street Car Park, The Glebe Car Park and East Avenue Road.

6.6 A pedestrian plaza and associated area is provided on Main Street. A pedestrian friendly area is provided, locally, on the Main Street one-way road carriageway.

Cyclists

6.7 An off-carriageway shared pedestrian/cycle route is provided locally along the south side of The Hahah, from Muckross Road to Mission Road. This shared cycle facility links with a segregated off-carriageway cycle lane along the south side of Mission Road.

6.8 Dedicated on-carriageway cycle lanes are provided locally, on both sides, on the north end of Muckross Road; and locally on the east side of Port Road, north of its New Road junction. An eastbound off-carriageway cycle lane is provided on the north side of Dr. Hans Leibherr Road, between Port Road and Rock Road. A westbound cycle lane is provided on the N72, west of Port Road.

6.9 A shared pedestrian/cycle access to Killarney National Park is provided on Port Road. This off road route through the Killarney National Park connects to the N72 east of Fossa. Cycle access to Killarney National Park is also provided from the N72 west of its Port Road Roundabout junction.

6.10 A northbound off-carriageway cycle lane is provided locally on the Westside of Arbutus Drive.

6.11 Cycle bay parking facilities are provided, by Kerry County Council and Killarney Municipal District, within New Street Car Park, High Street Car Park, Fairhill Car Park and Lewis Road Car Park.

Other Users

- 6.12 Tactile blistered paving, for the visually impaired, is provided at many pedestrian crossing locations, on the existing road and street network, throughout the Study Area.

Motorcyclists

- 6.13 There are limited parking facilities for motorcycles within the town centre area.

On-Site Observations

- 6.14 During the on-site inventories, the following operations were observed:
- A discontinuous footway on the east side of Beech Road at the commercial loading area;
 - Crossing demand on High Street between parked vehicles. There are no defined uncontrolled or controlled crossing locations between the junctions at either end of High Street;
 - No controlled crossing facility at the east end of New Street at its Main Street/High Street junction, to facilitate pedestrian movement along the west side of Main Street/High Street, and to and from New Street;
 - Discontinuous segregated pedestrian routes within The Glebe Car Park entrance/exit area. The priority footway along the entrance and exit junctions on College Street, at The Glebe Car Park, is at-grade and not always observed.
 - Conflict between pedestrians and taxi movements at College Street and The Glebe Car Park;
 - Cycle activity at the no cycle marking on the west side of the north end of Port Road, south of Ballydowney Roundabout;
 - Ad-hoc cycle parking activity at street poles on the Main Street plaza area;
 - Ad-hoc motorcycle parking activity on the Main Street plaza area;
 - No footway, cycle lane or rubbing strip, adjacent to the boundary wall, on the east side of Port Road, from south of Port Road; and
 - No footways, locally, on the east side of Lewis Road; on the north side of Park Road, east of Countess Road to the N22 Park Road Roundabout; on the west side of Rock Road, north of New Road; on the west side of Arbutus Drive, north of the Tesco access to Deerpark Close; and on Ballycasheen Road, east of White's Bridge.

7.0 EXISTING PUBLIC TRANSPORT

Bus Éireann

- 7.1 The Killarney Bus Éireann Station is located on the south side of Fair Hill, on the east side of the town centre and adjacent to the Killarney Iarnród Éireann Railway Station, as shown on Figure 9. Killarney Bus Éireann Station provides local, regional and national bus services, including tourist season services.

Private Bus/Coach Services

- 7.2 Killarney is also served by private bus operators, including national services to Dublin and Cork.
- 7.3 Buses and coaches travel the Ring of Kerry tourist route, in an anticlockwise direction, via the N72 westbound from Killarney, the N70 and the N71 northbound to Killarney.

Facilities

- 7.4 Town centre on-street bus/coach set-down parking areas and bays include along the east side of East Avenue Road, west side of Kenmare Place, north side of Mission Road and south side of New Street. Bus set-down areas have a 30 minutes maximum stay.
- 7.5 Barrier controlled off-street parking for coaches and buses is provided, by Kerry County Council and Killarney Municipal District, at the Lewis Road Coach/Bus Park, with 25 dedicated spaces.

School Buses

- 7.6 Schools in Killarney are served by school bus services. Dedicated bus parking bays are provided at each of the three schools located on New Road.

Iarnród Éireann

- 7.7 Iarnród Éireann's Killarney Railway Station is located on the east side of East Avenue Road, as shown on Figure 9, immediately adjacent to the Killarney Bus Éireann Station. A Pelican controlled pedestrian crossing is provided on East Avenue Road at its access junction with Killarney Railway Station.

- 7.8 Iarnród Éireann's train services at Killarney Railway Station include those services on the Tralee/Killarney/Mallow rail route and its national connections, and the other stations served on those routes.

Taxis

- 7.9 Dedicated taxi rank parking is provided on-street on the south side of College Street, at its Plunkett Street end; and off-street at the entrance area at The Glebe Car Park, as shown on Figure 9. The Glebe Car Park and its taxi rank area includes segregated entry and exit junctions. College Street and Plunkett Street are one-way westbound from the exit junction at The Glebe Car Park.

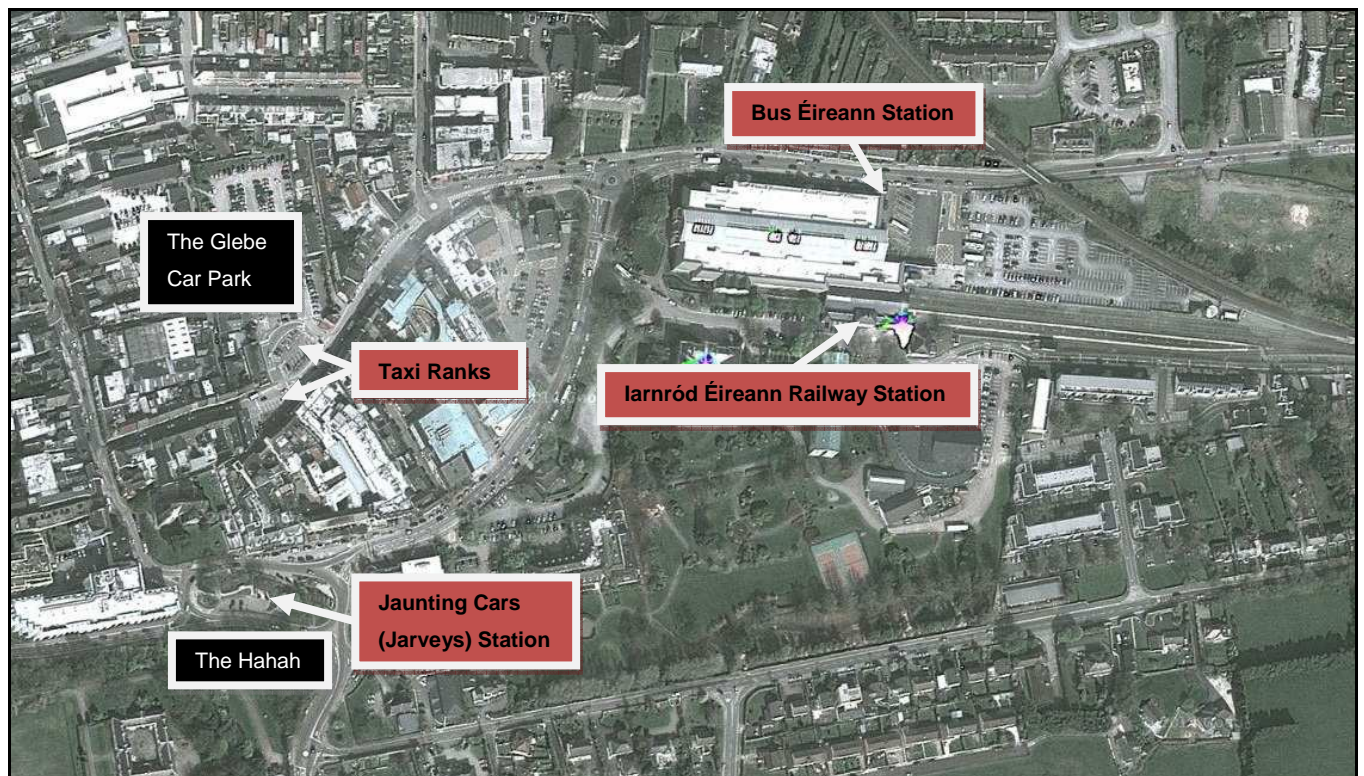
Jaunting Cars (Jarveys) Station

- 7.10 Killarney is currently served by approximately 37 licensed jaunting cars (jarveys). The Jaunting Cars (Jarveys) Station is located at The Hahah, in the centre of its one-way loop roundabout system. A Pelican controlled pedestrian crossing is provided on the north side of The Hahah, and a zebra controlled pedestrian crossing is provided on the south west side of The Hahah, to facilitate pedestrian access to the central Station.
- 7.11 Access for jaunting cars (jarveys) at the Jaunting Cars (Jarveys) Station is provided on the south side of The Hahah one-way loop roundabout system with segregated entry and exit junctions.

On-Site Observations

- 7.12 During the on-site inventory, the following operations were observed:
- Taxi parking in restricted areas on Main Street, in the vicinity of its Plunkett Street junction; and
 - Taxi parking in restricted areas on Kenmare Place.
 - As previously detailed, slow exiting jaunting cars (jarveys) were observed crossing two-lanes of one-way westbound traffic, at The Hahah, to Mission Road; and
 - As also previously detailed, slow moving jaunting cars (jarveys) were observed delaying other vehicles on Mission Road, resulting in overtaking manoeuvres.

Figure 9 – Town Centre Public Transport Hubs



8.0 EXISTING SCHOOLS ACCESS

- 8.1 The locations of existing town centre schools are shown on Figure 10. These include Holy Cross Mercy Primary School, Presentation Monastery National School and Killarney Community College, located on the north side of New Road; and St. Brigid's Secondary School located on the north side of New Street. St. Oliver's Primary School is located south east of the town centre, on Rookery Road.
- 8.2 Access to schools, and their associated access facilities, are summarised hereunder for each school.

New Road Schools

- 8.3 During school term, westbound access to New Road is prohibited, from 8.15 a.m. to 9.30 a.m. and from 2.30 p.m. to 4.00 p.m., Monday to Friday. This includes from Rock Road, St. Anne's Road and Bohreen Na Goun.
- 8.4 There is a Pelican controlled pedestrian crossing on Port Road, south of its New Road junction; a zebra controlled pedestrian crossing on Rock Road, at its New Road junction; and controlled pedestrian crossing facilities at the High Street/St. Anne's Road traffic signals junction which facilitate pedestrian access to the New Road schools.
- 8.5 Defined uncontrolled pedestrian crossing locations are provided on New Road at its priority junctions with Rock Road and Port Road, with central pedestrian refuge islands. A school warden is in attendance during school start and finishing times.

Holy Cross Mercy Primary School

- 8.6 Holy Cross Mercy Primary School is located on the north side of New Road, at its eastern end. Westbound access to New Road is prohibited during school start and finish times. Holy Cross Mercy Primary School is located east of the Bohreen Na Goun junction on New Road, which facilitates access from Bohreen Na Goun during school times.

8.7 A zebra controlled pedestrian crossing is provided on New Road at the Holy Cross Mercy Primary School, with associated pedestrian railings on both sides. On-street parking is prohibited, locally, on both sides of New Road at the school. A dedicated school bus parking bay, for set-down and collection, is provided immediately west of the school access, on the north (school) side of New Road.

8.8 An off-street school car park is provided for staff only. On-street pay and display parking is permitted on both sides of New Road, east and west of Holy Cross Mercy Primary School.

Presentation Monastery National School

8.9 Presentation Monastery National School is located on the north side of New Road, at its western end, and immediately east of Killarney Community College. Westbound access to New Road is prohibited during school start and finish times. The school is located west of the New Road/Bohreen Na Goun junction.

8.10 A dedicated school bus parking bay, for set-down and collection, is provided immediately west of the school access, on the north (school) side of New Road.

8.11 On-street pay and display parking is permitted on the north side of New Road, in the vicinity of the school. On-street parking is prohibited on the south side of New Road, at its western end, between its Bohreen Na Goun and New Road junctions, in the vicinity of the Presentation Monastery National School and Killarney Community College.

Killarney Community College

8.12 Killarney Community College is located on the north side of New Road, at its western end, and immediately west of Presentation Monastery National School. Westbound access to New Road is prohibited during school start and finish times. The school is located west of the New Road/Bohreen Na Goun junction.

8.13 A dedicated school bus parking bay, for set-down and collection, is provided immediately west of the school access, on the north (school) side of New Road.

- 8.14 On-street pay and display parking is permitted on the north side of New Road, in the vicinity of the school. On-street parking is prohibited on the south side of New Road, at its western end, between its Bohreen Na Goun and New Road junctions, in the vicinity of the Presentation Monastery National School and Killarney Community College.

St. Brigid's Secondary School

- 8.15 St. Brigid's Secondary School is located on the north side of New Street, at its western end.
- 8.16 A zebra controlled pedestrian crossing is provided on New Street at St. Brigid's Secondary School, with associated footway build-outs and bollards on both sides. An off-street school car park is provided for staff only. On-street pay and display parking is permitted on the south side of New Street.
- 8.17 West of St. Brigid's Secondary School, a zebra controlled pedestrian crossing is provided on Port Road, at its Cathedral Place junction. A Pelican controlled pedestrian crossing is provided on New Street, east of the school, on the west side of the New Street/Beech Road junction.

St. Oliver's Primary School

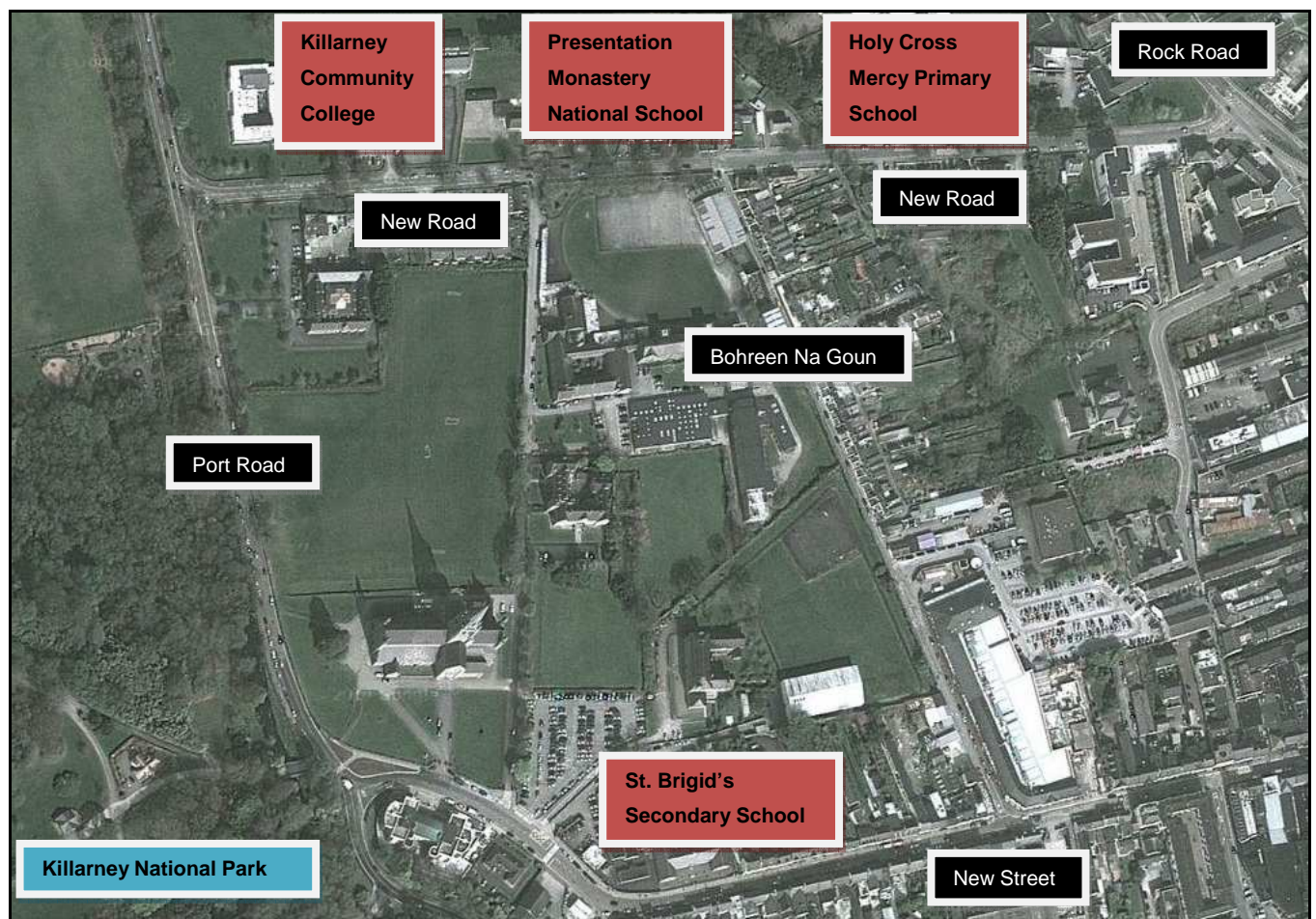
- 8.18 St. Oliver's Primary School is located on the west side of Rookery Road, south east of Killarney town centre. Rookery Road forms priority controlled junctions with Countess Road and Woodlawn Road/Ballycasheen Road at its northern and southern ends, respectively. A zebra controlled pedestrian crossing is provided on Countess Road, at its Rookery Road junction. Continuous footways are provided along the west side of Rookery Road; north side of Woodlawn Road; and north side of Countess Road, west of its Rookery Road junction. A continuous footway is provided along the south side of Countess Road, east of its Rookery Road junction.
- 8.19 Vertical speed control traffic calming measures are provided on Rookery Road, Countess Road and Woodlawn Road.

- 8.20 An off-street school car park is provided for staff only. On-street recessed parking perpendicular to the road carriageway is provided on Rookery Road at the school. Recessed disabled driver parking and set-down parking is also provided. Bollards are provided along the footway on Rookery Road, locally at the school. On-street parking is prohibited on the east side of Rookery Road, in the vicinity of St. Oliver's Primary School.

On-Site Observations

- 8.21 During the on-site inventories, the following operations were observed at schools:
- Children cycling along the footway on Countess Road;
 - Uncontrolled faded non-standard yellow box crossing on Rookery Road, north of St. Oliver's Primary School;
 - Parking in restricted areas at St. Oliver's Primary School;
 - Parked bus blocking southbound lane on Rookery Road at St. Oliver's Primary School; and
 - Cars parked on the footway south of St. Oliver's Primary School.

Figure 10 – Town Centre School Locations



9.0 EXISTING GOODS ACCESS

Restricted Routes

- 9.1 A three tonnes heavy vehicle restriction is in operation on Countess Road, Rookery Road and Woodlawn Road/Ballycasheen Road.

Commercial Loading Bays

- 9.2 A schedule of on-street town centre loading bays is provided in Table 4.

Table 4 – Schedule of Town Centre Commercial Loading Bays

Street	Commercial Loading Bays	
	Number	Location
Beech Road	Area	East side
New Street	Area	South side, east of Beech Road junction.
High Street	Area	West side
	Area	East side
Rock Road	1	West side, north of High Street junction.
Kenmare Place	1	West side
	Area	East side
Main Street	1	East side

- 9.3 Commercial loading bays have a 30 minutes maximum stay.

On-Site Observations

- 9.4 During the on-site inventories, the following loading operations were observed:
- Undefined/faded road markings at the commercial loading zone on Beech Road and conflict with pedestrians;
 - Loading parking in restricted areas on the west side of Beech Road;
 - Loading parking in restricted areas on the north side of New Street, east of Beech Road;
 - Loading parking in restricted areas on the south end of High Street, within junction area with New Street;
 - Loading parking on the west side of Main Street, at its southern end, immediately adjacent to its Plunkett Street junction;

- Loading parking demand on the central median road marking on College Street, immediately east of its mini-roundabout junction with Lewis Road;
- Off-street loading parking in restricted areas within New Street Car Park East and The Glebe Car Park; and
- A heavy goods vehicle using Rookery Road and passing St. Oliver's Primary School.

APPENDIX 2 - Assessment of Existing Proposed Schemes at Design Stage Report

Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | Limerick | London

**Kerry County Council and
Killarney Municipal District**

**Killarney Town Traffic
Model/Traffic Management Study**

**Assessment of Existing Proposed
Schemes at Design Stage**

Project No.: 16925
Document No.: 6002
Date: November 2015

Kerry County Council and Killarney Municipal District

**Killarney Town Traffic Model/Traffic Management
Study**

**Assessment of Existing Proposed Schemes at Design
Stage**

Malachy Walsh and Partners, Engineering and Environmental Consultants

Address: Park House, Mahon Technology Park, Bessboro Road, Blackrock, Cork

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Appendix A - Town Centre Street and Road Network

Appendix B – Layout drawings

1.0 INTRODUCTION

Appointment

- 1.1 In September 2015, Kerry County Council and Killarney Municipal District appointed Malachy Walsh and Partners to carry out their Killarney Town Traffic Model/Traffic Management Study.
- 1.2 Kerry County Council's Study Brief contains the assessment of a number of schemes and proposals that include the following:
- High Street Improvement Works;
 - Plunkett Street Improvement Works;
 - High Street, St. Ann's Road, Rock Road Improvement Scheme - Reprioritisation of Traffic at High Street Junction;
 - Review of existing signal controlled junctions at Muckross Road / Ross Road and Muckross Road / Woodlawn Road; and
 - Number of Town Centre Jarvey Peak Hour Licences.
- 1.3 This report details the assessment and recommendations for the schemes.

Study Brief

- 1.4 Kerry County Council and Killarney Municipal District's Brief for the Killarney Town Traffic Model/Traffic Management Study identified the aim of the study as *"a review of the transportation network and the associated demands with particular attention to the town centre area with the objective of determining the impact of proposed infrastructural measures to cope with the existing and future vehicular, pedestrian and cyclist traffic volumes"*.

Existing Situation Report

- 1.5 The Study Brief for the Existing Situation Report stated that *"The Study will investigate and report upon the current situation in Killarney Town and Environs, to include:*
- *Current land use;*
 - *Proposed development zoning;*
 - *Proposed development sites;*
 - *Existing road and street network;*

- *Existing traffic flow;*
- *Existing facilities for pedestrians;*
- *Existing facilities for cyclists;*
- *Existing access to schools;*
- *Existing town centre parking;*
- *Existing movement of goods vehicles;*
- *Current public transport facilities.*

1.6 A draft Existing Situation Report was issued in draft format for consultation with, and consideration by, Kerry County Council and Killarney Municipal District on 27th of October 2015. The report and inventory has been used as informing data to these assessments.

1.7 The Town Centre Street and Road Network are provided graphically in Appendix A.

Methodology

1.8 This Assessment of Preliminary Schemes Report has been prepared on the basis of the following:

- The Killarney Town Traffic Model/Traffic Management Study draft Existing Situation Report (2015);
- Consultation meetings with Kerry County Council and Killarney Municipal District;
- On-site inventories of existing facilities and observations of existing operations, by Malachy Walsh and Partners;
- The Department of Transport Tourism and Sport's (DTTAS) Design Manual for Urban Roads and Streets (DMURS);
- The UK Design Manual for Road and Bridges Advice Note TA79/99, Traffic Capacity of Urban Roads; and
- Kerry County Development Plan 2015 – 2021.

2.0 HIGH STREET IMPROVEMENT WORKS

Proposed Works

- 2.1 Kerry County Council proposes to upgrade High Street's existing alignment. The proposed Scheme is provided in Appendix B.

Existing Environment and Layout

- 2.2 High Street is an existing one-way town centre street which connects Main Street to the south to St. Ann's Road to the North. It is intersected by New Street at its south end and Monsignor O'Flaherty Road near its north end. Several laneways intersect it's alignment from the east and west. Laneways intersecting High Street include both pedestrian laneways and those allowing vehicular access. Access is provided to on-street car parks on both sides. Street lighting is provided. High street is within the 50kph speed limit. Provision is made for access across footways with parking prohibition by means of yellow clearway boxes.
- 2.3 Parking is permitted on both sides of High Street where sufficient road width is provided. This includes:
- The majority of High street with the exemption of a section to the south of Market Lane, north of New Street;
 - Locations of yellow clearway boxes, at laneways and entrances; and
 - Locations where parking meters have been installed on kerbed built-out areas.
- 2.4 Disabled user parking has been provided along High Street including two spaces to the south on its west side and one further north on the east side. These are clearly indicated with a blue surface and road markings.
- 2.5 Two commercial loading bay areas are provided on High Street. One on the east side and one on the west side.
- 2.6 Dedicated pedestrian footways are provided along the extent of High Street on both sides. However, the existing pedestrian capacity is limiting during peak times. The allocation of the roadway to vehicle use is not considered to be appropriate on the basis of demand, particularly during peak tourist season. Footways are restricted while a very wide carriageway is provided, with generous parking widths, to both sides along much of the alignment.
- 2.7 Typical building uses on High Street include retail, restaurants and small offices.

Existing Issues

- 2.8 As outlined above, High Street is a key Killarney Town Centre urban street. As such, there is a proliferation of pedestrian movements along and across High Street, accessing commercial premises and travelling to other parts of the town, including from car parking areas via laneways. These parking areas include the Glebe Car Park (206 spaces) and New Market Lane Car Park (34 spaces), and other private parking areas.
- 2.9 High Street Car Park is located at the north end of High Street and is accessed from within the intersection of St. Ann's Road and High Street. Cycle parking is provided at High Street Car Park but there are no dedicated cycle parking facilities within High Street. Pedestrian crossing facilities are provided this junction. High Street provides a direct continuous route to Main Street / New Street and Killarney Town Centre.
- 2.10 There is no formal controlled pedestrian crossing between Main Street and St. Ann's Road along High Street. There are no built-out reduced width areas to reduce the width for pedestrian crossings. As outlined above, the carriageway on High Street is wide and the footways are not generous. The existing footways are between approx 1.7 metres and 2.2 metres in width. The carriageway varies and is up to 6.0 metres in width with generous parallel parking widths provided. The one-way through carriageway exceeds recommended widths resulting in longer than desirable pedestrian crossing width requirements and less passive speed reduction.
- 2.11 There is a proliferation of car parking to both sides of High Street for much of its alignment. This, considered with a lack of built-out kerbed crossing areas, results in pedestrians crossing the wide one-way carriageway lane from behind parked cars and high sided commercial vehicles, putting them at risk of vehicular impact.
- 2.12 Peak season results in very significant pedestrian volumes compared with off-peak season demand.
- 2.13 It is concluded, therefore, that the existing facilities for pedestrians on High Street are minimal for their location, and substandard with reference to guidance from the DTTAS DMURS.

- 2.14 As outlined above, car parking is provided along both sides of High Street with a 'Pay and Display' permit requirement. There are a significant number of spaces. There is high demand for these town centre spaces. Access to the parallel parking spaces can result in delays for through traffic, and queuing along the carriageway.

Proposed Works

- 2.15 It is proposed to regularise the through-carriageway on High Street to a consistent 3.7m width. It is proposed to enhance the footways by the provision of enhanced widths at a number of locations.
- 2.16 Kerbed build-out areas would be provided at a total of four locations, on both the east and west side.
- 2.17 Sections of the enhanced footway widths on the north end of High Street would be used to provide planting, as would the built-out areas on the south end.
- 2.18 The existing loading bay would be retained. Disabled parking spaces would be reinstated.
- 2.19 It is understood that the proposed scheme could result in the loss of up to two parking spaces.

Scheme Impact

- 2.20 It is envisaged that the proposed scheme would have a negligible impact on the vehicular capacity of High Street. The UK DMRB outlines the capacity of the High Street to be 1,140 vehicles, conservatively using the classification of a UAP4. The existing traffic volume is of the order of 537 during the peak hour.
- 2.21 This considers the effect on capacity of the side roads and parking provision. The small reduction in car parking is likely to increase the carrying capacity of High Street. The reduced carriageway width is not likely to affect traffic speeds to an extent where it would reduce the capacity; however, it is likely to have a small reduction in observed speeds during off-peak times. This would be a positive impact in terms of safety.

- 2.22 The proposed scheme would increase the pedestrian capacity of High street for pedestrians travelling along High Street as a result of the increased footway widths.
- 2.23 The decreased crossing widths result in less time required to cross the street which may reduce delays to vehicular traffic.
- 2.24 The vertical definition provided by the vegetation and the reduced carriageway is likely to result in a reduction in vehicle speeds. This could reduce the severity of any collisions. The possible reduced speed could better facilitate the movement of cyclists with traffic, reducing overtaking of cyclists and improving safety for cyclists. As outlined in the Malachy Walsh and Partners' draft document Existing Situations Report 16925-6001-Rev. A, there is a relatively high volume of cyclists in Killarney, with reference to the recorded August 2015 peak season peak hour traffic volumes.

Recommendation

- 2.25 It is recommended that the proposed works at High Street should be progressed subject to detailed design. The provision of an enhanced crossing facility for disabled and visually impaired users should be considered.

Summary and Conclusion

- 2.26 It is proposed to enhance High Street, consistent with the DTTAS DMURS objectives and methods contained therein.
- 2.27 The proposed scheme would have a negligible impact on the vehicular capacity of High Street. A small reduction in parking would result.
- 2.28 The pedestrian environment and carriageway capacity would be enhanced. Pedestrian safety is likely to be improved.
- 2.29 It is recommended that an enhanced crossing facility should be considered as the scheme design progresses.
- 2.30 It is recommended that the scheme should progress to detailed design stage.

3.0 PLUNKETT STREET IMPROVEMENT WORKS

Proposed Works

- 3.1 The proposed Traffic calming measures for Plunkett Street would include proposed enhanced pedestrian footways, with bollards, and a reduced carriageway. The existing two lane approach to Main Street would be changed to provide a single lane for left and right turning movements. A raised table crossing would be provided in line with the footway along the east side of Main Street. The proposed Plunkett Street Improvement Works are provided in Appendix B.

Existing Layout

- 3.2 The existing Plunkett Street carriageway lane width varies and is approximately 4.0 metres in width. Footways are provided to the north and south and measure approximately 1.2m in width but vary.
- 3.3 Plunkett Street forms the minor approach to Main Street. Main Street is one-way north bound only, north of Plunkett Street. Main Street is two-way, south of Plunkett Street. Plunkett Street is yield controlled on approach, however, the left turn is unopposed.
- 3.4 Plunkett Street has a straight alignment from College Square to Main Street.

Existing Issues / Characteristics

- 3.5 Main Street is one of Killarney's key town centre streets and as such has a pedestrian friendly nature with recent works enhancing the environment and providing a shared pedestrian area. Main Street does however retain vehicle carrying capacity, with significantly enhanced footways to both sides.
- 3.6 Loading Bays are provided to the west side immediately north of Plunkett Street and to the east side, to the south of New Street.

Capacity

- 3.7 The proposed works include three features which may result in a change of vehicular capacity to Plunkett Street and the Plunkett Street / Main Street Junction. These are detailed and assessed hereunder.

Cross Section

- 3.8 It is proposed to reduce the carriageway width to 3.25 metres. Carriageway widths may affect carrying capacity of roads and streets; however, Plunkett Street is a town centre street with low observed speeds. With reference to UK DMRB TA79/99, it is estimated that the Plunkett Street one-way street has a carrying capacity of 1,110 vehicles with a classification of UAP4.
- 3.9 The proposed road width would not significantly reduce speeds such as to affect the conservatively assumed carrying capacity of the road.
- 3.10 This exceeds the peak hour vehicle movements recorded during peak season.
- 3.11 It is acknowledged that the proposed bollards may have a speed reduction affect effect but these features are considered in assuming a classification of UAP4 above.

Table-Top Crossing

- 3.12 The proposed includes the provision of a raised table crossing along Main Street, for pedestrians crossing Plunkett Street. There is an existing pedestrian demand across the junction, which is currently facilitated by an uncontrolled crossing indicated by its location and subtle dish geometry.
- 3.13 The proposed table-top crossing would enhance the provision for pedestrians. The existing driver behaviour observed includes the informal yielding of drivers to pedestrians. This affects the existing capacity. This is not likely to change as a result of the proposal. It is envisaged that the affect of the proposal would be a positive impact in terms of safety but negligible in terms of capacity.

Reduction of Entry Lanes

- 3.14 It is proposed to combine the left turn and right turn lanes. This measure would typically have a significant impact on capacity within an urban road network. Junctions are typically the limiting factor for capacity within urban road networks. There are however, two key parameters which determine the benefit of the two approaches. These are geometry and traffic flow pattern and volumes.

- 3.15 The existing two lanes provided are narrow and below standard, with reference to the NRA DMRB TD41/42_11. Minimum lane widths within the guidelines are 3.0 m with reference to DMURS minimal standards. Plunkett Street is a single lane road with widening locally at the approach to Main Street.
- 3.16 The reduction in lanes at the approach would reduce the pedestrian crossing width requiring less time for pedestrians to cross, and stopping traffic flow from Plunkett Street.
- 3.17 The practical effect on capacity is that it operates as a one-lane approach most of the time, and does not facilitate heavy vehicles within the indicated lane. The corner radii are quite short, which exacerbates the affect of the restrictive lane widths.
- 3.18 Junction modelling software such as TRL PICADY would not determine an increased capacity as a result of the second lane and would treat it as a single lane approach, albeit with a higher width versus the proposed reduced scenario. The reduction would have no affect on the output capacity of a PICADY analysis. SATURN software requires the input of saturation flow values appropriate for each turning movement, rather than geometric information. Geometric information is used to determine an appropriate value for the modeller to assign. The assignment of values appropriate to the 'with' and 'without' measures to this proposal would not impact the capacity requirement at the junction for the model, unless two distinct lanes were inputted to the model. This however would not be a realistic representation.

Traffic Flow

- 3.19 As outlined above, traffic volumes on Plunkett Street are low, and of the order of 400 vehicles during the peak hour. More than 80% of the volume turn right on to Main Street travelling north. The left turning vehicles are unopposed as main Street is one-way northbound. The right turning vehicles must yield to northbound traffic on Main Street. This volume is of the order of 330 vehicles during the peak hour.
- 3.20 There is a reserve capacity on the basis of traffic volumes, with or without a two lane approach.

Existing Observations

- 3.21 There is an existing set-down / loading area located approximately ten metres north of Plunkett Street on Main Street's west side. Vehicles stopped at this location are not within the swept path of vehicles travelling from Plunkett Street to Main Street. However, it has been observed by Malachy Walsh and Partners and Kerry County Council that drivers use the area behind (south of) the Loading Bay to set down. This can impede traffic turning right from Plunkett Street to Main Street. This can result in drivers required to reverse back to allow for movement to Main Street. This results in delays and congestion during peak times. This is significantly exacerbated when heavy vehicles are restricted. There are significant adverse safety implications as a result of the required manoeuvres in particular the reversing of heavy vehicles within the high pedestrian demand area.

Conclusions / Summary

- 3.22 The proposed measures would result in an enhanced pedestrian environment, with enhanced pedestrian off-carriageway capacity along Plunkett Street and potentially improved safety for pedestrians travelling along Main Street.
- 3.23 The reduced carriageway width along Plunkett Street would not significantly affect the capacity of Plunkett Street.
- 3.24 The existing two-lane approach does not perform as a two-lane approach. The length of the provision of two lanes would not significantly increase capacity with enhanced lane width on the approach and its provision would be contrary to DMURS guidance.
- 3.25 The provision of a table-top crossing and reduced crossing width across Plunkett Street would enhance the pedestrian environment.
- 3.26 The reduced crossing width could reduce the impact in capacity of pedestrian movements on traffic flow.
- 3.27 The reduction of two lanes to one lane would not significantly reduce capacity.
- 3.28 On the basis of the proposed geometry, there would be sufficient capacity at the junction to provide for existing peak hour turning movements.

Recommendations

- 3.29 It is recommended that measures should be provided to restrict set-down to the south of the loading bay not the west side of Main Street. This could be in the form of a kerbed 'build-out'.
- 3.30 It is recommended that the option of removing the bollards from the proposed scheme should be considered. The proposed bollards would reduce the capacity of the footways along Plunkett Street, and could result in pedestrians stepping on the carriageway particularly during peak times putting them at risk of vehicular impact.

4.0 HIGH STREET, ST. ANN'S ROAD, ROCK ROAD IMPROVEMENT SCHEME - REPRIORITISATION OF TRAFFIC AT HIGH STREET JUNCTION

Existing Layout

- 4.1 The existing High Street, St Ann's Road, Rock Road junction includes the provision of access to Monsignor O'Flaherty Road from St Ann's Road. The existing route to Monsignor O'Flaherty Road from St Ann's Road has priority from the north end of High Street. Northbound traffic from High Street must stop for inbound traffic to Monsignor O'Flaherty Road from St. Ann's Road. Traffic from Monsignor O'Flaherty Road is also 'Stop' controlled. This results in two 'Stop' controlled approaches from the junction.

Issues Arising

- 4.2 When two drivers are waiting at High Street northbound and from Monsignor O'Flaherty Road eastbound, priority is unclear. The assumption would be that vehicles approaching from the right would have priority. However, this is not a roundabout type situation, and vehicle approaching from High Street are turning right, across a lane. Vehicles from Monsignor O'Flaherty Road approach on a straight movement through the priority controlled junction. Notwithstanding signage, intuitively this would be the priority movement in the layout.
- 4.3 The legal status of who has priority may be vague in the case of a collision.
- 4.4 There is an uncontrolled pedestrian crossing facility at the existing junction, immediately east of the stop line on Monsignor O'Flaherty Road. This is not a standard type of crossing location within a T-junction however it is on a likely desire-line. Pedestrians moving from south to north at this crossing have reasonable visibility to all approaches but have to look through 180 degree to see approaching left turning vehicles from High Street. Left turning drivers from High Street are required to look to their right, to vehicles on approach to Monsignor O'Flaherty Road from St. Ann's Road. This can draw their attention from people attempting to cross Monsignor O'Flaherty Road to their left, with consequent potential risk to pedestrians.

Proposed Layout

- 4.5 The proposed High Street, St Ann's Road, Rock Road Improvement Scheme is provided in Appendix B, as presented for a Section 38 (Traffic Calming Scheme) planning application. It is understood that the majority of submissions requested that the junction would remain as it is at present.
- 4.6 The proposal includes:
- High Street one-way northbound only, to St. Ann's Road;
 - High Street would form the priority route at its intersection by Monsignor O'Flaherty Road; and
 - Associated turning restrictions and traffic management measures.

Vehicular Impact

- 4.7 Traffic could no longer access Monsignor O'Flaherty Road directly from Rock Road/St. Ann's Road.
- 4.8 This results in diversion for inbound traffic only. All trips to the area are terminating as there is no through traffic on Monsignor O'Flaherty Road. Diverted traffic is categorised as locally diverted traffic and non-local diverted.

Locally Diverted Traffic

- 4.9 These values are likely to be low due to the nature of the developments and land-uses accessed via Monsignor O'Flaherty Road.
- 4.10 Vehicles accessing this area are more likely to be from beyond the local area. These include tourists accessing their residences from outside Killarney, along radial routes, staff at Hotels, the Office of Public Works, and other businesses arriving by car are also likely to originate further than locally.
- 4.11 Therefore, locally originating traffic is likely to arrive by foot or by bicycle.
- 4.12 Pedestrians arriving by foot would be provided with a more standard junction layout at both St. Ann's Road and at High Street. A controlled crossing would be provided at High Street/St. Ann's Street junction. An uncontrolled crossing with dishing and tactile facilities would be provided at the Monsignor O'Flaherty Road /High Street junction. This junction would be a standard T-junction layout.

- 4.13 Provision for pedestrian access would therefore be enhanced. Cyclists would be required to dismount. The classification of cyclists who may be accessing Monsignor O'Flaherty Road from St. Ann's Road are considered likely to be satisfied to dismount to cross the section which would revert to a one-way system. They would, therefore, avail of the enhanced pedestrian facilities.
- 4.14 It is, therefore, concluded that the impact for local trips is unlikely to be significant with potential impact to safety.

Non-Local Diverted Traffic

- 4.15 Non-local traffic accessing the area by motor vehicle is likely to originate from the periphery of the town or any of the key radials, including the N70 (Killorglin Road), the N22 (Tralee Road), N22 (Cork Road) or the N71 (Flesk Road). The directions of approach considered therefore include north, south, east and west from the periphery of the town. It is likely that routing decisions would take place on that basis, and detailed hereunder.

South (N71)

- 4.16 Vehicles from the south would mainly access Monsignor O'Flaherty Road (subject area) via High Street and are unlikely to divert.

West (N72/Fossa)

- 4.17 These trips would have likely options of accessing the subject area via Rock Road, and Port Road via New Road or High Street. The trips would be of similar distance. It is likely that during peak times, there may be some delays on Hans Liebherr Road accessing Rock Road or New Street/High Street area. New Road approach may provide a more attractive route. However, this is likely to be out of school periods and non-tourist trips.
- 4.18 It is considered, therefore, that the delays to traffic accessing the area (Monsignor O'Flaherty Road) for diverted traffic is likely to be negligible. It is envisaged that there would be a low value of diverted traffic from Rock Road and New Road to New Street High Street. On the basis of the total number of trips from St. Ann's Road/Rock to Monsignor O'Flaherty Road is likely to be insignificant.

North N22 (Tralee)

- 4.19 These trips would have a number of options for accessing the subject area including Port Road and Upper Lewis Road. However, the main route would be via Rock Road. The existing demand would be likely to divert via Lewis Road, College Street/ Plunkett Street and High Street or Hans Liebherr Road, Mission Road, New Street and High Street, as a result of the proposed measures.
- 4.20 As before, the total number of trips travelling from St. Ann's Road to Monsignor O'Flaherty Road are low, and the impact of the diverted traffic, distributed as above, would be very low.

South N22 (Cork)

- 4.21 The key routes for traffic terminating in the area (Monsignor O'Flaherty Road) from the N22 would access the area via:-
- Park Road, East Avenue, the Hahah, Main Street and High Street; or
 - N22 Bypass, Upper Lewis Road, St. Ann's Road to Monsignor O'Flaherty Road.
- 4.22 It is envisaged that a higher proportion of these movements would access via Park Road/High Street and would not be diverted as a result of the proposed works. This is on the basis of the likely trip types, route direction and distances.
- 4.23 Accordingly, it is envisaged that those diverting from the N22 Bypass route would be re-assigned to the Park Road, The Hahah, Main Street and High Street, resulting in a small increase in vehicles.
- 4.24 A summary of the likely diversions is provided in Table 1.

Table 1 – Summary of Diversions

Existing Routes		Proposed Routes	Change
N71 South	High Street	High Street	None
N72 West	High Street via Port Road , New Road via Port Road, Rock Road	High Street via Port Road	Small increase at High Street. Small decrease on New Road and Rock Road
N22 North	Rock Road	Port Road/ New Street/High Street, Upper Lewis Road/High Street	Small reduction on Rock Road. Small increase on Upper Lewis Road/ Port Road/ New Street/ High Street
N22 South	Park Road/High Street, Upper Lewis Road/St. Ann's Road	High Street	Very small increase on Park Road/ High Street Reduction on Upper Lewis Road/ St. Ann's Road.

4.25 The individual impact of the diversion in each direction is likely to be negligible volume, if any, from the N71 and a low proportion from the N72. Much of the N22 Tralee, however, would be distributed over two routes connecting to High Street. A small proportion from the N22 (Cork) is likely to be redistributed to High Street south of Monsignor O'Flaherty Road. The cumulative volumetric impact is likely to be imperceptible.

Summary

4.26 On the basis of the above, the total low values attracted (inbound only trips), it is envisaged that the volume of reassigned traffic would be negligible and imperceptible. A slightly higher proportion would be observed on the High Street section of the route, north of Main Street/New Street junction.

- 4.27 It is considered that the safety improvements and the more standard layout which would be provided would warrant the likely volumetric impact on High Street. As outlined above, this would be very low.
- 4.28 It is envisaged that there would be a benefit to safety as a result of the scheme, via the provision of a more standard layout with improved pedestrian facilities.

5.0 REVIEW OF EXISTING SIGNAL CONTROLLED JUNCTIONS AT MUCKROSS ROAD / ROSS ROAD AND MUCKROSS ROAD / WOODLAWN ROAD

Existing Environment

- 5.1 Muckross Road (Flesk Road) forms a section of N71 National Secondary Route, Ring of Kerry Tourist Route. It is a key radial route to Killarney from the south.
- 5.2 It provides a direct vehicular route for several large hotels, guest houses and B & Bs to the town. It provides a connection for a large permanent residential catchment to the south which intersects Muckross Road via distributor roads including Ross Road, Muckross Drive, Woodlawn Road, Kingspark, Muckross Grove and the Priory.
- 5.3 Woodlawn Road provides access to the N71 and Killarney Town for a large volume of residential properties but also forms part of an informal southern orbital route which connects the N71 with the N22 Cork to Killarney National Primary Road.
- 5.4 Ross Road provides access to residential areas but also provides access to Killarney Racecourse and Golf Club, and Ross Castle. Ross Road junction is approximately 430m north of Woodlawn Road.
- 5.5 Countess Road intersects Muckross Road approximately 85 metres north of Ross Road forming a mini-roundabout junction.
- 5.6 The Hahah is located approximately 75 metres north of Countess Road.
- 5.7 There is a proliferation of direct accesses to Muckross Road between Ross Road and Woodlawn road. These include several guesthouse and B & Bs, a hotel, two filling stations with retail units, a filling station with car showrooms, and other residential properties.
- 5.8 The N71 Muckross Road is an urban single two-way road with footways and street lighting. Sections of the alignment include on-street, and off-street, cycle lanes, however, there is some discontinuity in the facilities. Muckross Road is within the 50 kph urban speed limit zone.

- 5.9 A right-turning facility is provided at both Ross Road and Woodlawn Road junction from Muckcross Road. A left turning lane is provided for south bound traffic on the N71 to Woodlawn Road. There is a two lane entry to Muckcross Road from both Ross Road and Woodlawn Road.
- 5.10 Muckcross Road / Woodlawn Road and Muckcross Road / Ross Road junctions are both signal controlled junctions. Controlled pedestrian crossings are incorporated into Ross Road junction, both across Muckcross Road (north side only) and across Ross Road. A controlled pedestrian crossing is incorporated into the signal controlled junction at Woodlawn Road across Muckcross Road (South side only) and across Woodlawn Road.
- 5.11 Both junctions operate with vehicle activation input loops.
- 5.12 There is a filling station immediately south of Ross Road which is accessed from both Ross Road and Muckcross Road. These accesses can have a significant affect on junction capacity and safety. Vehicles accessing the filling station entrance from Ross Road undertake slow turning movements from within and adjacent to the Ross Road/ Muckcross Road junction area. This can significantly reduce speeds or stop traffic travelling into or out of the junction area.

Traffic Volumes

- 5.13 Peak hour traffic volumes recorded during August 2015 indicate south bound traffic volumes during the evening peak on Muckcross Road, between Ross Road and Woodlawn Road of approximately 550 vehicles. Northbound volumes of approximately 570 vehicles were recorded.
- 5.14 With reference to the UK DMRB TA79/99, the capacity per lane of Muckcross Road is of the order of 1,300 vehicles per hour in each direction, assuming a classification of UAP3. Accordingly, the traffic volumes do not exceed the link capacity.
- 5.15 However, in urban areas, the link capacity is not typically the limiting factor. Junctions, such as the signal controlled Ross Road and Woodlawn Road intersections reduce the approach capacity due to the red and amber phases.

- 5.16 Uncontrolled accesses, such as the multiple filling stations and residential unit's direct accesses on Muckcross Road also have a significant reduction in capacity. This is due to slowing and turning into accesses, waiting to turn right and potentially blocking the through-lane, and informal give way to accessing vehicles.
- 5.17 Traffic turning movements indicate a significant right turning movement from Muckcross Road south bound from Killarney to Ross Road. This movement is indicated to be 311 vehicles during the evening peak hour in August. This is a significant proportion of the total southbound volume from Killarney of approximately 760 vehicles.
- 5.18 Outbound vehicles from Ross Road to Muckcross Road were 117 vehicles and 104 vehicles north and south bound respectively. The total two-way flow on Ross Road is indicated as approximately 700 vehicles.
- 5.19 Ross Road junction is likely to be operating near, or at, capacity as a result of the traffic volumes, in particular the right turning movement to Ross Road, and the adjacent petrol filling station, which has accesses within the signal controlled junction area. Five perpendicular parking spaces are provided on Ross Road adjacent to the junction. Reversing movements, in, out of, and around these spaces have a negative impact on the capacity of the junction.

Observations / Issues

- 5.20 Journey time surveys carried out during the peak season indicate travel times of approximately 14 minutes from south of Woodlawn junction to The Hahah. This is compared to approximately three minutes during the off-peak season.
- 5.21 Inbound queuing extends during peak season, from Ross Road to south of Woodlawn junction. Clearway yellow boxes are provided at key junctions. Queuing along this section of Muckcross Road is not typically from the Countess Road junction or The Hahah. This indicates that the key capacity restriction for inbound traffic is at the Ross Road junction.

Options Considered

5.22 Options considered for the enhancement of the operation of Muckcross Road include the following:

- Reduce Traffic volumes;
 - Additional car park
 - Increase use of Woodlawn / Ballycasheen Road for private vehicles
 - Enhanced sustainable transport
- Linked signals;
- Enhanced signals (optimisation); and
- Reduced side-friction / proximate movements.

Reduced Traffic Volumes

5.23 As outlined above, the capacity of the Muckcross Road infrastructure is below the level of demand for inbound vehicles during peak season. This occurs during evening peak hours and can occur throughout the day, due to the quantum and turning movements required.

5.24 A fundamental consideration to resolve this is to reduce the demand. This could be achieved via a number of options, including diverting traffic via alternative routes, curtailing journeys or mode shift. A significant volume of traffic during peak season is tourist traffic. Weather conditions during peak season tend to be better than off-peak season, and more suitable to non-car based transport.

Additional Parking

5.25 The potential provision of additional parking along Muckcross Road was considered. The provision of a car park at this location could reduce the number of vehicles entering Ross Road / Muckcross Road junction from the south. Its location on a key radial route into the town should be within an appropriate walking distance to the town centre, with continuous pedestrian facilities.

5.26 Tour coaches travel around the Ring of Kerry tourist route in an anti-clockwise loop. This location would allow drivers to set-down and wait for their passengers without entering the town. It is understood that this may not be suitable for all tours.

- 5.27 A reduction in northbound trips beyond this location could result in an overall reduction in vehicle trips in Killarney Town. It is possible that there may be some induced trips from north to south as a result; however, it is considered that this is unlikely to be significant due to the quantum of provision and location.

Increased use of Ballycasheen / Woodlawn Road

- 5.28 Ballycasheen Road / Woodlawn Road provides for a southern route around Killarney connecting the N71 with the N22. Drivers unfamiliar with this route, accessing the N71 south of Woodlawn Road, including the INEC and other large hotels, travel via Park Road, East Avenue and Muckross Road, and through the Ross Road junction. This includes both tourist and local traffic.
- 5.29 The option of highlighting this route to reduce volumes through Killarney could be considered. This could be achieved via signage. The negative implications of increased traffic and geometric restrictions along the route would need to be considered, along with objectives and policies of Kerry County Council. Improvement works along this route are included in the existing Killarney Development Plan. The existing three tonne weight restriction should be considered.
- 5.30 A high proportion of traffic to Killarney terminates in the town. An origin-destination survey should be carried out in peak season to assess the likely change in traffic flow.
- 5.31 Reduced volumes from the junction would primarily be through-traffic travelling between Muckross Road north of Ross Road and Muckross Road south of Ross Road junction.

Enhanced Sustainable Transport

- 5.32 A mode shift from car based transport to walking, cycling or public transport could reduce traffic volumes, queuing and delays for inbound and outbound traffic at Muckross Road. The provision of an enhanced pedestrian environment could encourage increased walking in the area. While there are typically continuous facilities provided throughout the area, there is scope for further improvements. These would include widened footways, greater sense of continuity of footways and junctions, entry treatments, shorter crossings, improved facilities for disabled users and, as a consequence reduced traffic volumes.

- 5.33 Similarly, the provision of a more continuous, safer, enhanced cycle infrastructure could encourage more use of cycling and a shift from car based transport. There are existing facilities, including recent improvements to the west side of Muckcross Road, north of Randle's Garage, where a section of segregated cycle facility is now provided.
- 5.34 The option of continuing the cycle and pedestrian facilities should be considered along with trip-end facilities, such as town centre high quality bike parking.
- 5.35 There is a significant volume of tourist accommodation on Muckcross Road, and an existing significant volume of cyclist traffic in Killarney generally. Bicycle (and motorbike) rentals are available locally.
- 5.36 As outlined in the Existing Situations report, relatively high volumes of pedal cycles were recorded on designated cycle/tourist cycle routes, including Muckcross Road. This provides a good basis for increased use, with the objective of reaching a critical mass, which would improve driver awareness and safety for cyclists in the area.
- 5.37 The promotion of sustainable travel by hotels and guesthouses, along with the enhancement of the urban realm could make a significant, albeit difficult to quantify, mode shift during peak tourist season.
- 5.38 There may be an opportunity for increased use of public transport in the area. This maybe a long term objective and could include the following:
- Shuttle buses between large hotels, The INEC, and Killarney Town Centre, and Killarney's bus and train stations;
 - Potential private operators; and
 - Liaison with Bus Éireann and Iarnród Éireann

Linked Signals

- 5.39 The potential benefits of linking the signals at Ross Road and Woodlawn Road junctions on Muckross Road were considered.
- 5.40 The benefit of linked signals includes the more efficient movement of traffic through a junction by maintaining movement and the prioritisation of a chosen route via two or more junctions.
- 5.41 It could be beneficial to prioritise the N71 Muckross Road movement through both junctions as it is the National Secondary Road, and has the greatest demand. However, linking the signals is unlikely to result in a significant benefit and would be unlikely to be significant. This is due to:
- The distance between the junction, and the number of junctions and direct accesses between Ross Road and Muckross Road;
 - The inefficiencies locally at Muckross Road / Ross Road junction; and
 - The pattern of turning movements, particularly at Ross Road junction.
- 5.42 The distance and number of accesses and movements occurring between the junction results in unpredictable travel times between junctions. While this can be monitored in real-time, the adjustments to facilitate the changes are likely to have a time lag and are unlikely to be beneficial over the distance. The movement of Jarveys may also influence the times.
- 5.43 The inefficiencies at the junctions result in unpredictable influences (such as parking spaces) at the junctions and can result in an unquantifiable change in the capacity of the green time for a given movement. This means that if a volume of traffic is released from one junction based on green time, the receiving junction may not match and be able to facilitate the demand or have excessive green time for that approach, resulting in efficient timing.
- 5.44 As outlined above, key volumes and turning movements at the junctions include right-turning movements which do not travel through both junctions resulting in reduced benefit from linking signals.

- 5.45 It is concluded that linking the signals could yield some benefit and control to traffic flow on Muckross Road. Monitoring of their operation would be required, and adjustments made accordingly.

Signal Optimisation

- 5.46 Optimising the operation of the signals on a standalone basis may be of benefit. This would include a review of the location of the vehicle detection loops and signal operation. The provision of pedestrian presence detectors could enhance the capacity of the junction and improve safety for pedestrians.

Reduced Movement in Close Proximity to Junctions

- 5.47 As outlined above, there are permitted vehicle turning movements in close proximity to Ross Road and Woodlawn junctions. These include filling station accesses and residential accesses close to both junctions. In addition, there are perpendicular parking spaces located adjacent to the Ross Road / Muckross Road junction area, which include reversing movements.
- 5.48 Notwithstanding potential safety issues, turning movements adjacent to junctions can significantly reduce the capacity of a junction. This type of impact is very difficult to accurately model and is best assessed by manual interpretation and on-site observation.
- 5.49 Two types of impact are described hereunder.

Location of an Access on Approach to a Junction

- 5.50 When vehicles queue on approach to a junction and fill a stacking area, this volume gets released and clears efficiently. However, if there is an interruption to this movement of total vehicles, the total queue does not clear. Such interruptions include the access within the south bound queue on the N71 toward Woodlawn road junction or right turning vehicles from Ross Road to the perpendicular parking adjacent to the filling station. This alteration to the flow of movement from stationary results in a reduced volume clearing the stop line during the 'green phase'.

Location of an Access Beyond a Junction

- 5.51 This is similar to that described above, however, it can also result in rear-end type impact. If a driver travels through a junction and carries out a turning movement immediately after the signals, this can be unexpected and results in a shockwave affect of slowing through the moving vehicles with drivers that expect to clear the queue. This results in inefficient movement of vehicles during the green phase and less vehicles crossing the 'stop' line with subsequent increased delays and queuing.
- 5.52 These issues relating to accesses are, of course, difficult to address in the short term due to third party considerations. There may be an opportunity for improvement in connection with future Planning Applications associated with properties such as filling stations and retail units. It is recommended that the above should be considered if the opportunity arises.

6.0 NUMBER OF TOWN CENTRE JARVEY PEAK HOUR LICENCES

Existing Jarvey Characteristics

- 6.1 Jaunting Cars are horse-drawn carriages which are a traditional business in Killarney, known as Jarveys. They operate throughout Killarney and their station is located at The Hahah, in the centre of its one-way loop roundabout system. A Pelican controlled pedestrian crossing is provided on the north side of The Hahah, and a zebra controlled pedestrian crossing is provided on the south west side of The Hahah, to facilitate pedestrian access to the central Station.
- 6.2 Access for Jaunting Cars (Jarveys) at the Jaunting Cars (Jarveys) Station is provided on the south side of The Hahah one-way loop roundabout system with segregated entry and exit junctions.
- 6.3 They are permitted travel on the public road network and there are many routes used by the Jarveys which are also permitted to travel through various routes not accessible by tour buses, 'hop on hop off' buses, or the road train that is in operation in Killarney.
- 6.4 As outlined above, the Jarvey Station is located at The Hahah. The routes are varied and include the following:
- Ross Castle and Killarney Estate; and
 - Muckross House and Gardens.

Existing Affect of Jaunting Cars

- 6.5 Jaunting Cars are slow moving vehicles which affect traffic flow in a manner that varies from motor cars.

Peak Times:

- 6.6 They have negligible difference when travelling within congested slow-moving traffic along road links.

- 6.7 They can, however, reduce the capacity of a junction relative to motor vehicles due to their slow moving nature. This includes their reaction time, acceleration speeds and gap acceptance. As described previously, the Muckross Road / Ross Road junction has a high volume of right turning movements to Ross Road which requires significant 'green time'. A Jarvey requires significantly more time and a longer gap in conflicting traffic. This utilises a high proportion of capacity.

Off-Peak Times:

- 6.8 During off-peak times, the speed differential between motor vehicles and jaunting cars is greater. This results in overtaking manoeuvres, which have safety implications and potential delays for following traffic.
- 6.9 During off-peak times the time requirement for manoeuvres at junctions in unchanged, however, their impact on junction capacity, where a junction is operating below capacity, is less significant.
- 6.10 It is likely that less Jarveys operate during off-peak season.
- 6.11 During both peak and off-peak season, the Jarveys may contribute to traffic calming, resulting in closer to desirable vehicle speeds.

Access and parking

- 6.12 The Jarvey Station is located at The Hahah. Their access to the road network from their parking area is relatively slow and may be unexpected for some road users. The Hahah is a one-way loop, however, and slow vehicles speeds are not always observed. As they merge with circulating traffic from the central island of The Hahah, they result in reduced vehicle speeds and can add delays.
- 6.13 It is understood that there are currently 37 licensed Jarveys in Killarney. 32 parking spaces are provided.

Impact of Additional Jarveys

- 6.14 The impact of increasing the number of licences available for Jarveys was considered. The impact of this is difficult to quantify.
- 6.15 It is considered that the affects outlined above would be materially increased with any increase in the number or activity of Jarveys. This includes both benefits and disbenefits.
- 6.16 The disbenefits during off-peak season times are not likely to be significant as the demand is not likely to result in significant increase in activity.
- 6.17 The disbenefit during peak season is likely to be proportional to the increased licenses. This includes delays at existing junctions including the Ross Road / Muckcross Road junction, the N72/N71/Dr Hans Liebherr Road, Ballydowney Roundabout and The Hahah. Junctions, including The Hahah, which are over capacity during peak season, are likely to be impacted.
- 6.18 The Hahah, which is the station for Jarveys and has direct accesses from within the central island, may be significantly impacted.
- 6.19 Further parking may be required during peak season. The location of the proposed additional parking should be reviewed, along with its proposed access to the road network.
- 6.20 If the proposed location would be at, or adjacent to The Hahah, it is likely to exacerbate the impact of the proposed increased volume on the road network.

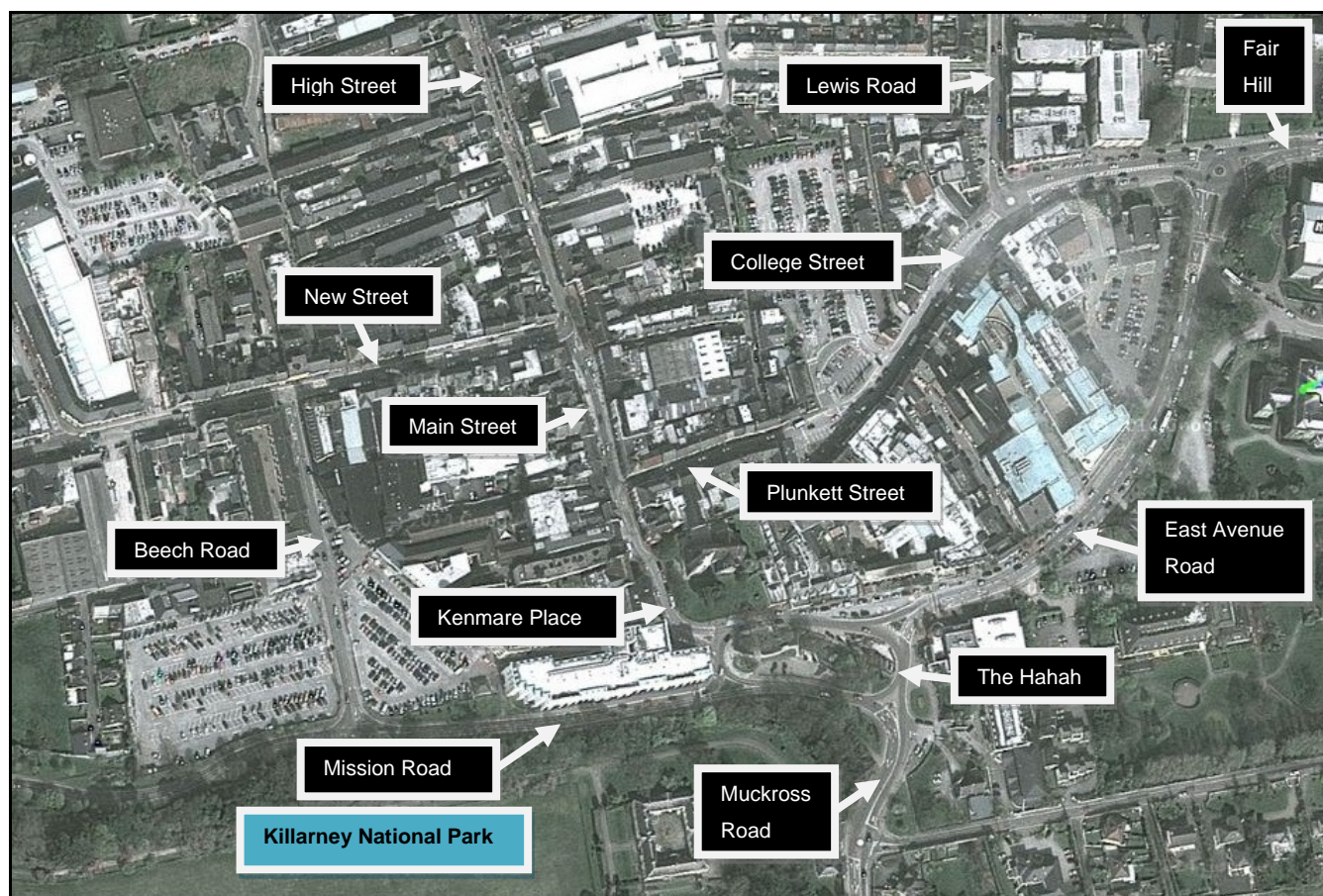
Conclusion

- 6.21 It is concluded that the Jarveys operate in a congested network with long delays. Any increase in Jarvey operation would result in increased delays due to their affect, particularly at junctions. Quantifying their impact would require extensive classified surveys during key routes and at key junctions. Data would be required with regard to routes to be increased as a result of additional licensed. Due to their flexibility, it is likely that definitive data would be very difficult to attain. It is recommended that any proposed increase should be subject to a detailed empirical analysis.

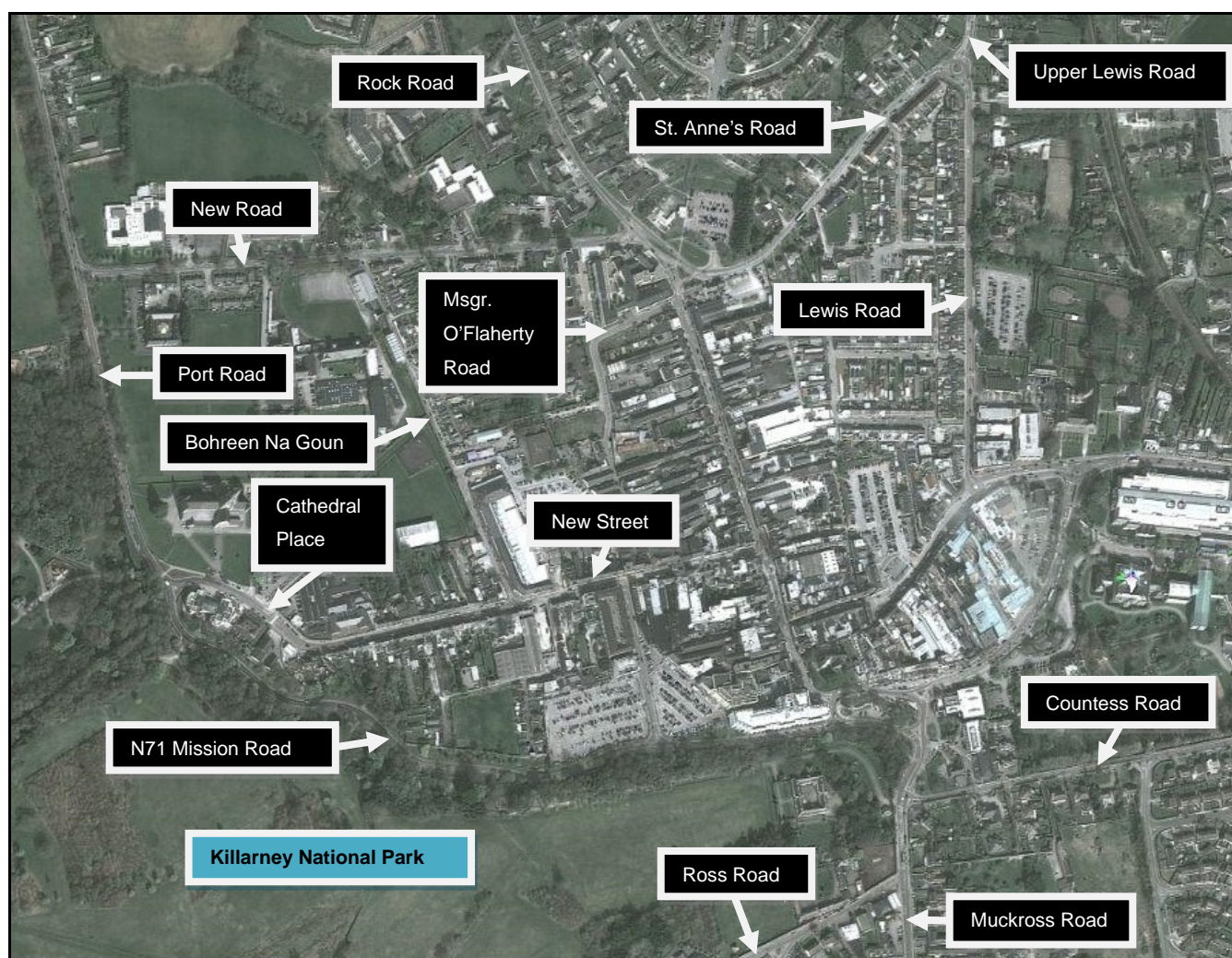
APPENDIX A

Town Centre Street and Road Network

Appendix A1 – Town Centre Street Network



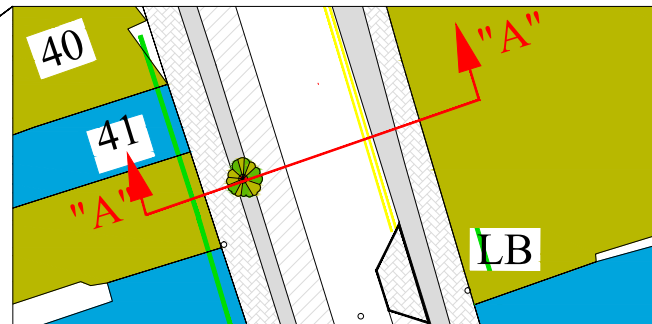
Appendix A2 – Town Centre Road Network



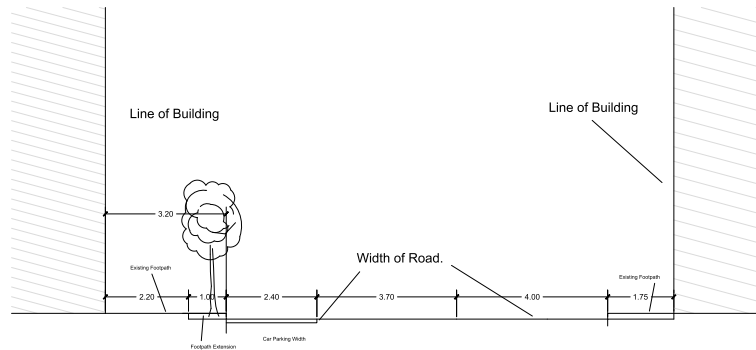
APPENDIX B

Layout Drawings

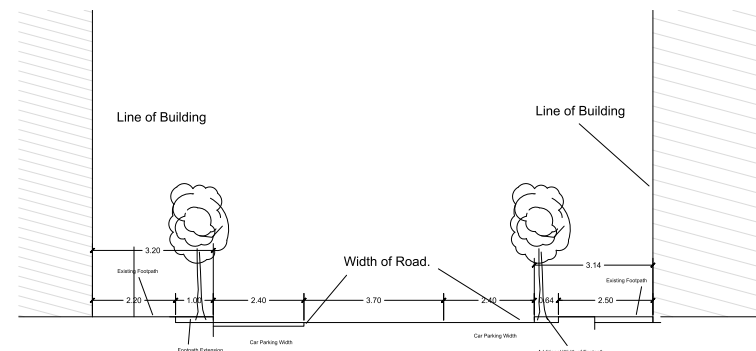
- Widened Footpaths
- Existing Footpaths
- Tree Planting Locations
- Street Parking



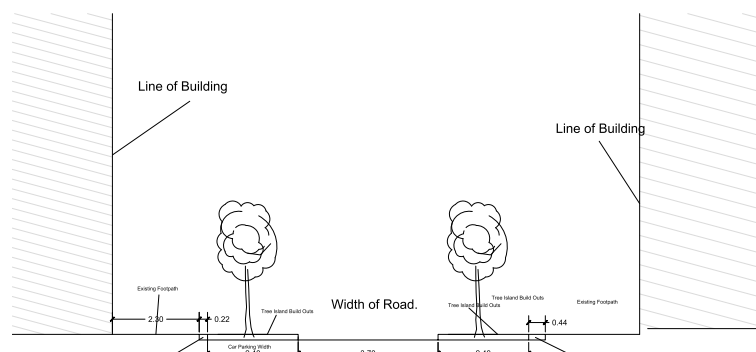
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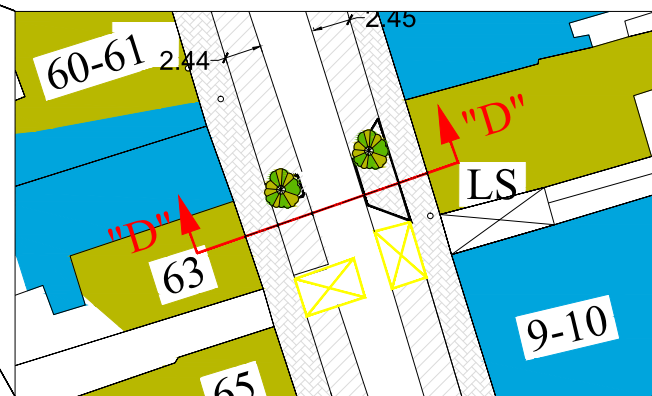
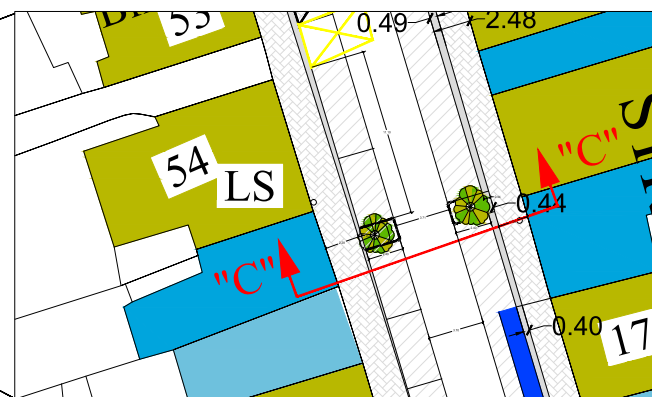
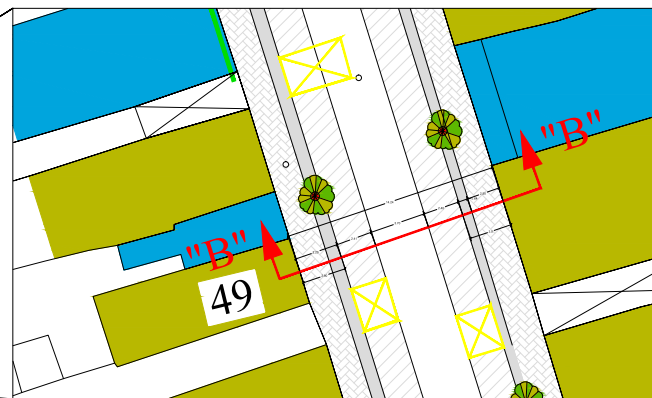
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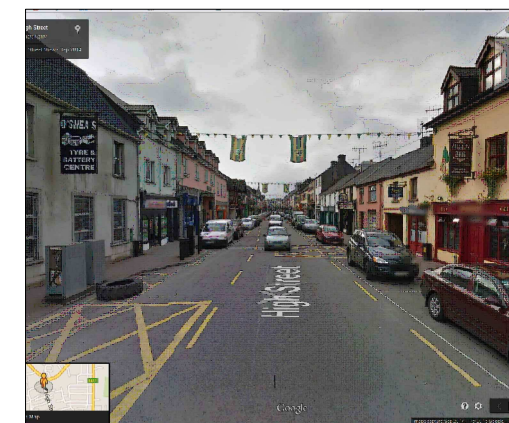
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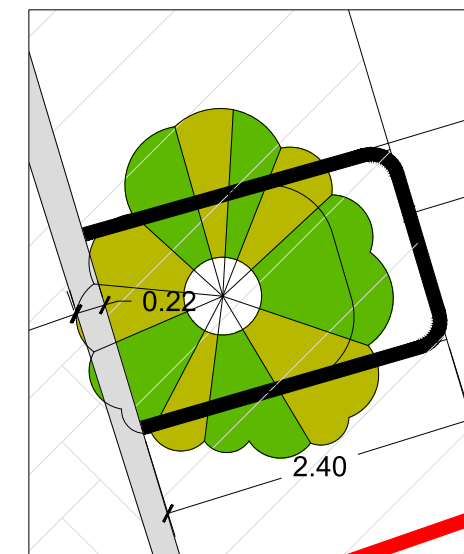
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View Looking North Up High Street.



View Looking South Down High Street.



Typical Layout of Tree Island Build Out.

Section 38.
1994 Road Traffic Act.



Kerry County Council

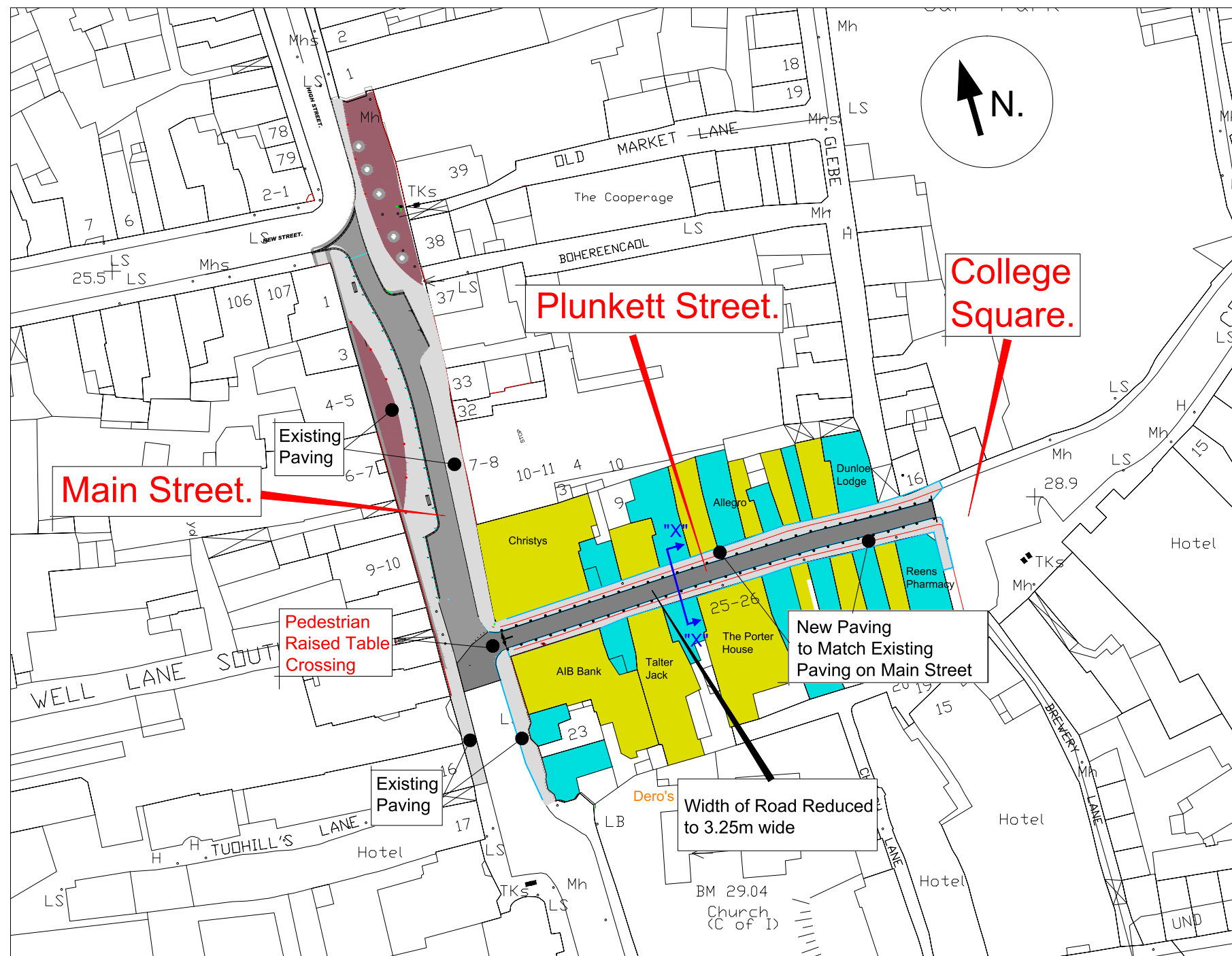
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Rev	Drawing Issue & Revision Control	Reviewed	Approved for Issue by	Issue Date
01				

Rev	Drawing Issue & Revision Control	Reviewed	Approved for Issue by	Issue Date
01	Legend:			

Project Name:	High Street Improvement Works	Job No.	
Title:	Proposed Section 38.		
Designed:	P. Neary	File Name:	y:/high Street Improvement Works Proposal April
Drawn:	A.J. Keane	Original scales:	N.T.S.
Checked:	P. Neary	Date:	August 2015
		Drawing No.	KTC2011/08/02



Section 38.
1994 Road Traffic Act.

APPENDIX 3 - Traffic Model Development and Traffic Schemes Modelling Assessments Report

Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | Limerick | London

**Kerry County Council and
Killarney Municipal District**

**Killarney Town Traffic
Model/Traffic Management Study**

**Traffic Model Development and
Traffic Schemes Modelling
Assessments Report**

Project No.: 16925
Document No.: 6003/Rev.C
Date: March 2016

Kerry County Council and Killarney Municipal District

Killarney Town Traffic Model/Traffic Management Study

Traffic Model Development and Traffic Schemes Modelling Assessments Report

Project No.	Doc. No.	Rev.	Date	Prepared By	Checked By	Approved By	Status
16925	6003	A	24.03.2016	S Quigley	C O'Callaghan	J O Leary	Draft
16925	6003	B	16.05.2016	C O'Callaghan	S Quigley	J O Leary	Draft
16925	6003	C	31.05.2016	C O'Callaghan	S Quigley	J O Leary	Final

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Malachy Walsh and Partners
Engineering and Environmental Consultants

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Appendices

Appendix A	Modelling Outputs Key Locations
Appendix B	2017 Forecast Year Modelling Outputs
Appendix C	2021 Forecast Year Modelling Outputs

1.0 INTRODUCTION

Appointment

- 1.1 In September 2015, Kerry County Council and Killarney Municipal District appointed Malachy Walsh and Partners to carry out their Killarney Town Traffic Model/Traffic Management Study.

Brief

- 1.2 Kerry County Council and Killarney Municipal District's Brief for the Killarney Town Traffic Model/Traffic Management Study identified the aim of the study as *"a review of the transportation network and the associated demands with particular attention to the town centre area with the objective of determining the impact of proposed infrastructural measures to cope with the existing and future vehicular, pedestrian and cyclist traffic volumes"*.
- 1.3 *"The key objectives of the Traffic Management Study include the development of a Traffic Model for the Town and Environs, as appropriate, to assess the following:*
- *The development of proposals for the town's transport system and road network that address traffic in the town;*
 - *Assessment of the potential benefit of proposed relief roads planned for the town including:*
 - *Inner Relief Road linking High Street and New Street via Boreen Na Goun; and*
 - *Gaelscoil Road linking Deerpark with the N22 Killarney Bypass.*
 - *Assess proposed changes to traffic movements in the town including:*
 - *Pedestrianising Main Street;*
 - *Pedestrianising Main Street and Plunkett Street;*
 - *Making New Street Upper one-way;*
 - *Making New Road one-way; and*
 - *Removing HGV's and buses from the town centre (Plunkett Street and Main Street)."*

Modelling Report

- 1.4 This Traffic Model Development and Traffic Schemes Modelling Assessments Report details the macro-simulation model development and the modelling assessment of a number of road links and town centre traffic management schemes, using SATURN modelling software. The model base year is 2015 and the future modelled years are 2017 and 2021. The summer tourist season peak hour has been modelled for each year.
- 1.5 Malachy Walsh and Partners met with Kerry County Council to discuss the initial draft of the Modelling Report, in April 2016. This updated report includes analysis of further scheme proposals.

Study Reports

Existing Situation Report

- 1.6 An Existing Situation Report for the Study was issued in draft format for consultation with, and consideration by, Kerry County Council and Killarney Municipal District in October 2015. The Existing Situation Report included:
- Current land use;
 - Proposed development zoning;
 - Proposed development sites;
 - Existing road and street network;
 - Existing traffic flow;
 - Existing facilities for pedestrians;
 - Existing facilities for cyclists;
 - Existing access to schools;
 - Existing town centre parking;
 - Existing movement of goods vehicles;
 - Current public transport facilities.

Assessment of Existing Proposed Schemes at Design Stage

- 1.7 An Assessment of Existing Proposed Schemes at Design Stage Report was issued in November 2015. The report included an assessment of the following preliminary scheme proposals:
- High Street Improvement Works;
 - Plunkett Street Improvement Works;

- High Street, St. Ann's Road, Rock Road Improvement Scheme - Reprioritisation of Traffic at High Street Junction;
- Review of existing signal controlled junctions at Muckross Road / Ross Road and Muckross Road / Woodlawn Road; and
- Number of Town Centre Jarvey Peak Hour Licences.

Study Recommendations Report

- 1.8 A Study Recommendations Report will be issued following consultation with Kerry County Council and Killarney Municipal District regarding this Modelling Report and the Study reports issued previously.

2.0 BASE YEAR TRAFFIC MODEL DEVELOPMENT

Study Area

- 2.1 The Killarney Traffic Model Study Area is shown in Figure 1. The Study Area, as defined in the Brief includes the developed town area and its environs. It extends from Ballydowney Roundabout, in the northwest, to the intersection of Ballycasheen Road with the N22 Cork Road, to the southeast. The SATURN based traffic model includes simulation modelling of the town centre area within and including the N22 Killarney Bypass to the north and Woodlawn Road to the south. The external road network outside of the town centre area was modelled in strategic detail, or 'buffer'.

Base Year 2015 Model Methodology

- 2.2 The Base Year Model development was undertaken to include the following key elements:

Zoning

- Determine the zoning system following a network inventory and consultation with Killarney Municipal District;

Network

- Build the base year SATURN network with detailed modelling (simulation) in the town centre, with less detail external to the town centre, as appropriate (buffer);

Matrix

- Establish the 'prior' base year matrix using Killarney Municipal District supplied matrix information from prior modelling carried out in relation to the Killarney Urban Masterplan 2004, Microsimulation modelling carried out in 2007, and parking data;
- Estimate the base year matrix using Classified Counts, Junction Turning Counts and Trip End data using SATURN's ME2 Matrix Estimation software;

Model Validation and Calibration

- Assign the base year matrix to establish the base year traffic model; and
- Calibrate and Validate the base year model to TII standards, as outlined in Volume 12 Section 2 of the TII Design Manual for Roads and Bridges (DMRB).

2.3 The stages of the Model development are illustrated in Figure 2.

Figure 1 - Study Area

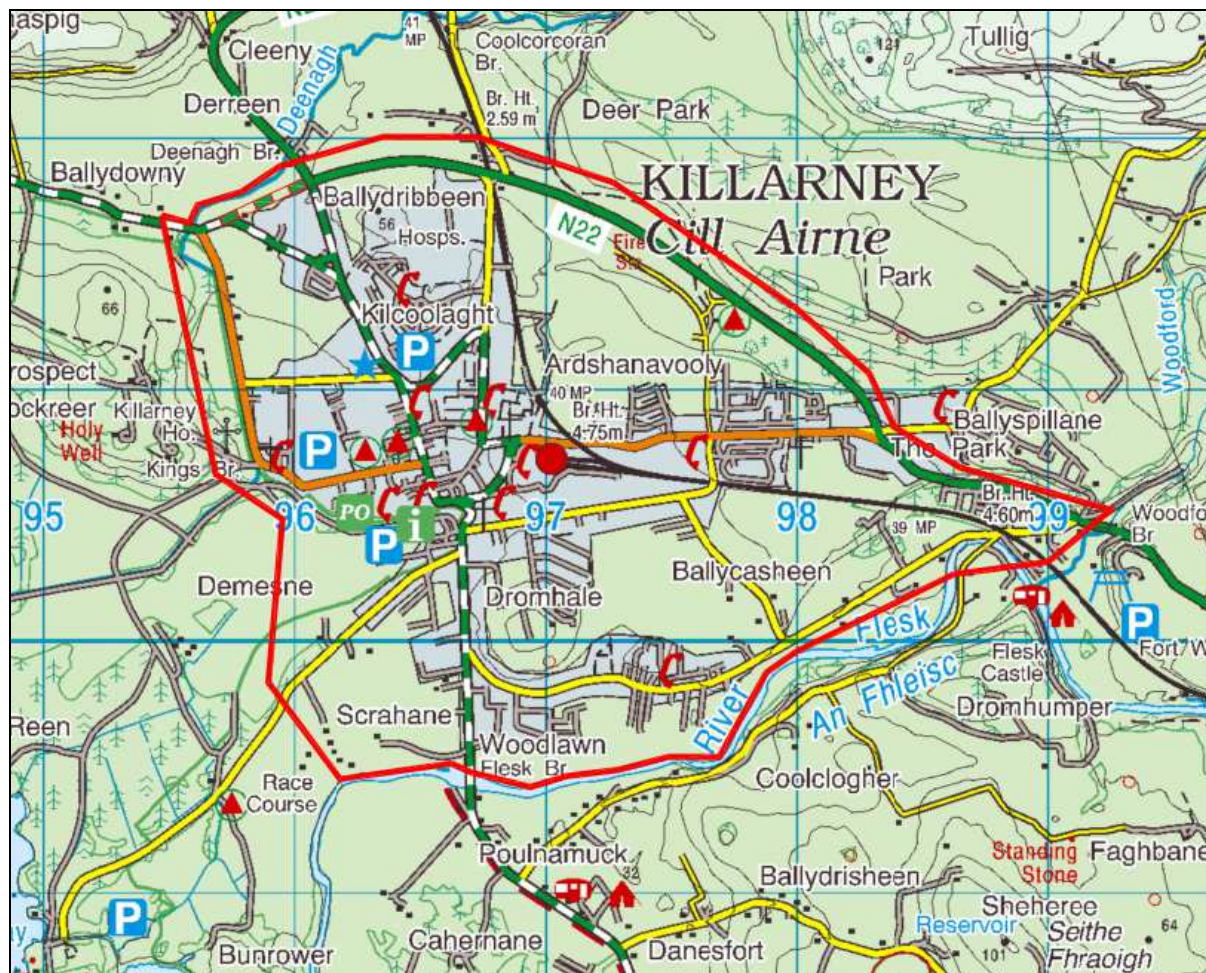
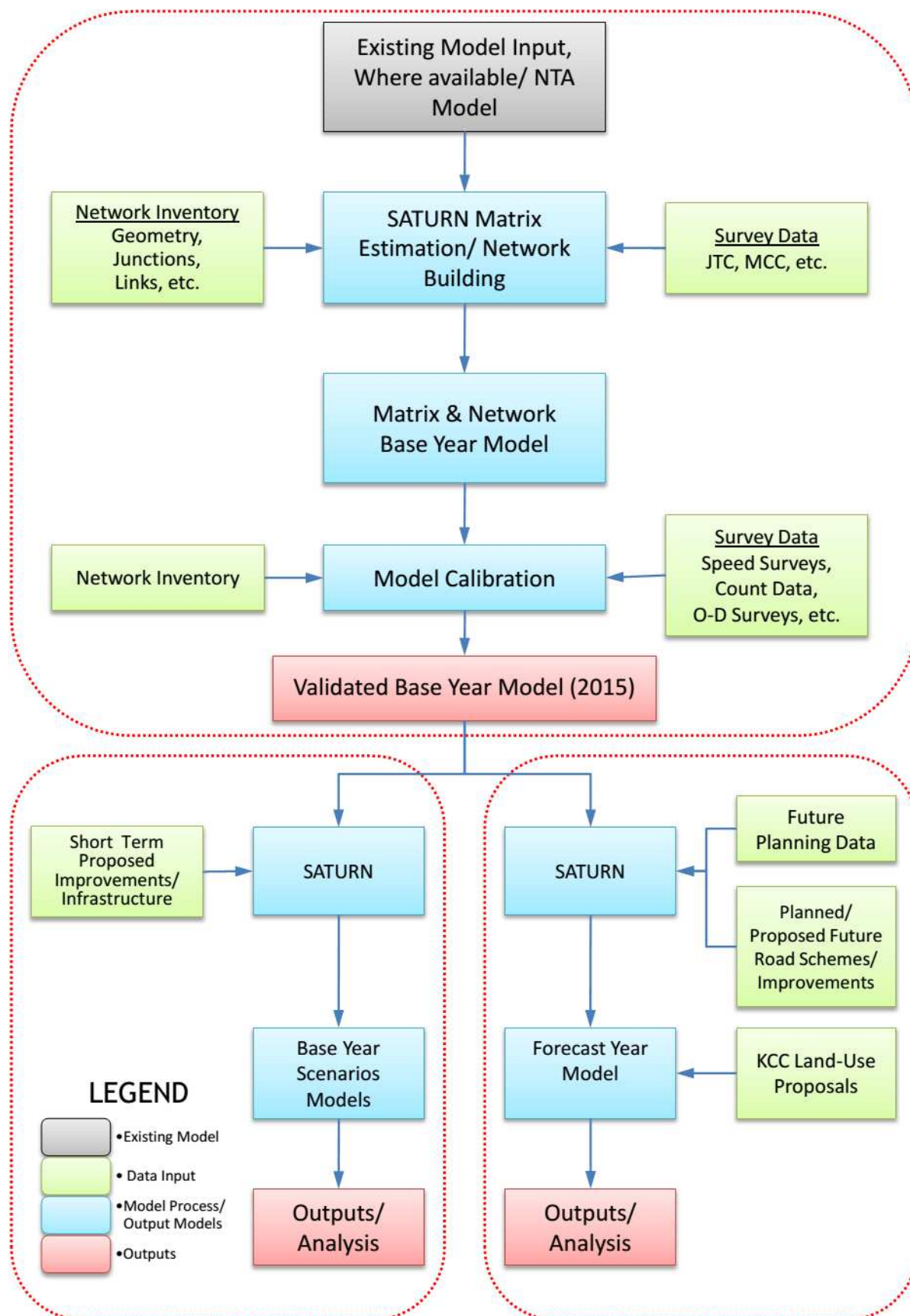


Figure 2 - Model Development



Base Year Zoning, Network and Matrix

2.4 The process of building the local detailed (base year) model included the following stages:

- Extracting distributions from the previously modelled travel patterns. Distributions for the Killarney Traffic model were extracted for use as an initial 'prior' matrix for the matrix estimation process;
- Disaggregating the internal zones. The Killarney Masterplan Model zoning system was used as the basis of the Distribution for the Killarney Traffic model. The Masterplan Model zoning was reviewed in the context of the existing road network, developments, car parks, and proposed infrastructure and objectives of this Study;
- Updating the internal zones to incorporate latest best knowledge of planning data including employment and residences;
- Building the road network to include all minor roads which may influence traffic in respect of the infrastructural changes to be assessed, including traffic management changes, and potential new road links;
- Coding the Killarney Town road network in detail, or simulation, as required;
- Using the data as outlined above to estimate a base year matrix;
- Assigning the resulting base year matrix from the Matrix Estimation to the Killarney Traffic model network; and
- Calibrating and validating the base year 2015 model. This provides a stable starting point for establishing the future year traffic model.

Model Calibration and Validation

2.5 The validation criteria are based on a comparison of observed counts and modelled flows using the GEH (Geoff Havers) statistic as a guide to the goodness of fit. The GEH statistic is a form of the chi-squared statistic commonly used in the UK. It is defined as;

$$GEH = \sqrt{\frac{(M - C)^2}{(M + C)/2}}$$

where: M = modelled flow;
C = observed flow (or count).

- 2.6 A GEH value can be calculated for individual links or groups of links. An acceptability guideline is that the GEH statistic for 85% or more of all counts should be less than 5, for local models. This value is generally taken as 10 for strategic models.
- 2.7 The base year (2015) travel demand matrix was assigned to the base year network describing the existing transport system. The modelled flows were compared to the observed traffic flows using the GEH statistic as a guide to the goodness of fit. A GEH value of less than 5 for at least 85% of link counts is criterion appropriate for the Killarney Traffic Model 2015 (KTM). The resulting model was checked using the following:
- Link counts;
 - Junction turning counts at key junctions;
 - Journey time surveys carried out on major routes; and
 - Travel patterns/ trip distributions.
- 2.8 The base year model calibration procedure focused on the calibration of the network and assignment of the vehicle-based trip matrix. The calibration involved a number of tasks, as follows:
- Checks to ensure that link lengths are coded accurately (based on the network and the maps received from Kerry County Council and available online resources);
 - Check that junctions and lanes are coded accurately, representing observed behaviour;
 - Checks that network links operate as expected (including correlation to 2015 data); and
 - Checking and adjustment of the network to ensure realistic routing of traffic in the model.
- 2.9 The above elements formed the basis of the calibration procedure. Each element was monitored and adjusted to improve both calibration and validation results.
- 2.10 The network was calibrated using traffic count data and journey time survey information. The traffic flow data, junction turning count data and traffic speed data was used to validate the model. The base year model was validated to TII standards, as outlined in Volume 12 Section 2 of the TII DMRB. The following sections summarise the model validation processes for the 2015 base year model.

Traffic Count Data

- 2.11 101 detailed classified counts were used to develop and validate the Killarney Traffic Model representing the evening peak period during August 2015. These counts were used to ensure that the model estimation and assignment validated to within an acceptable criteria in the simulation area of the model.

Traffic Counts Validation

- 2.12 41 detailed classified turning volume counts represented the Killarney evening peak period during August 2015. These counts were used to ensure that the model estimation and assignment validated to within an acceptable criteria in the simulation area of the model.
- 2.13 98% of all Manual Classified Counts in the Killarney Traffic Model have a GEH value of less than 8, and 88% less than 5, when compared with the corresponding observed data. The turning count validation results are shown in Table 1. The comparison of observed and modelled link flows for each location shows that 88% of the link flows are within the validation criteria.

Table 1 - Road Link Data: Modelled and Observed Flows

<i>Location/ Ref No.</i>	<i>Observed Flow</i>	<i>Modelled Flow</i>	<i>GEH</i>	<i>Within Criteria GEH < 5</i>
Upper Lewis Road/ N22 Bypass Junction				
1	114	111	0.28	Yes
2	95	98	0.29	Yes
3	230	182	3.35	Yes
4	178	181	0.23	Yes
Muckcross/ Road Ross Road Junction				
18	311	294	0.98	Yes
19	117	136	1.7	Yes
20	104	113	0.85	Yes
21	171	90	7.11	No
Muckcross Road/ Woodlawn Road				
22	179	185	0.48	Yes
High Street/ New Street Signals				
30	391	378	0.68	Yes
32	178	193	1.14	Yes
Main Street/ Plunkett Street Junction				
33	330	331	0.07	Yes
34	77	78	0.06	Yes
The Hahah				

<i>Location/ Ref No.</i>	<i>Observed Flow</i>	<i>Modelled Flow</i>	<i>GEH</i>	<i>Within Criteria GEH < 5</i>
37	579	551	1.18	Yes
38	513	502	0.5	Yes
39	322	359	2.01	Yes
Muckcross Road/ Countess Road Mini Roundabout				
41	351	340	0.6	Yes
42	230	209	1.42	Yes
43	109	96	1.24	Yes
44	86	82	0.47	Yes
Lewis Road/ College Road Roundabout				
62	113	116	0.26	Yes
Park Road Roundabout				
63	73	48	3.24	Yes
64	304	312	0.48	Yes
65	499	492	0.3	Yes
66	53	46	1.04	Yes
67	272	266	0.36	Yes
68	146	145	0.07	Yes
69	372	370	0.1	Yes
70	419	361	2.91	Yes
71	145	147	0.13	Yes
Park Road/ Countess Road Roundabout				
72	171	173	0.14	Yes
73	323	333	0.54	Yes
74	141	144	0.28	Yes
75	82	81	0.06	Yes
76	109	105	0.43	Yes
77	131	123	0.69	Yes
78	251	254	0.18	Yes
79	450	447	0.15	Yes
80	31	50	2.92	Yes
81	325	306	1.06	Yes
82	112	116	0.35	Yes
83	161	159	0.13	Yes
New Road/ St Anne's Road Junction				
84	132	131	0.06	Yes
85	437	426	0.54	Yes
86	194	195	0.08	Yes
87	125	125	0.03	Yes
88	291	291	0.02	Yes
89	243	85	12.29	No
Ballydowney Roundabout				
90	306	308	0.1	Yes
91	104	97	0.67	Yes

<i>Location/ Ref No.</i>	<i>Observed Flow</i>	<i>Modelled Flow</i>	<i>GEH</i>	<i>Within Criteria GEH < 5</i>
92	358	364	0.32	Yes
93	522	517	0.22	Yes
94	143	158	1.19	Yes
95	3	13	3.57	Yes
96	14	48	6.05	No
97	107	107	0.03	Yes
98	6	7	0.56	Yes
99	416	379	1.85	Yes
100	201	202	0.05	Yes
101	15	18	0.62	Yes

Turning Volume Counts Validation

- 2.14 60 detailed classified turning volume counts represented the Killarney evening peak period during August 2015.
- 2.15 In excess of 85% of modelled counts, including junction turning counts, in the Killarney Traffic Model have a GEH value of less than 5, when compared with the corresponding observed data.
- 2.16 A summary of the correlation between the recorded turning traffic flow and modelled turning traffic flow is outlined in Table 2.

Table 2 - Junction Turning Data: Modelled and Observed Flows

<i>Location/ Ref No.</i>	<i>Observed Flow</i>	<i>Modelled Flow</i>	<i>GEH</i>	<i>Within Criteria GEH < 5</i>
Lewis Road/ St Anne's Road Roundabout				
5	553	544	0.37	Yes
6	177	168	0.69	Yes
7	235	249	0.88	Yes
8	640	606	1.35	Yes
Cleeny Roundabout				
9	648	583	2.61	Yes
10	896	672	7.99	No
11	835	499	12.99	No
12	774	682	3.41	Yes
13	856	854	0.08	Yes
14	696	696	0.01	Yes
15	506	539	1.46	Yes

Location/ Ref No.	Observed Flow	Modelled Flow	GEH	Within Criteria GEH < 5
Port Road/ New Road Junction				
16	547	558	0.48	Yes
17	550	560	0.44	Yes
Muckcross Road/ Woodlawn Road Signals				
23	519	510	0.39	Yes
24	168	169	0.1	Yes
25	560	555	0.21	Yes
Bohreen Na Goun/ New Street Junction				
26	273	277	0.26	Yes
27	182	179	0.21	Yes
28	141	139	0.18	Yes
29	239	214	1.64	Yes
High Street/ New Street Junction				
31	537	528	0.37	Yes
Main Street/ Plunkett Street Junction				
35	168	164	0.35	Yes
The Hahah				
36	78	72	0.68	Yes
40	509	525	0.71	Yes
Muckcross Road/ Countess Road Mini-Roundabout				
45	644	484	6.75	No
Countess Road/ Rookery Road Roundabout				
46	248	261	0.8	Yes
47	245	332	5.15	No
48	193	277	5.45	No
49	166	167	0.08	Yes
Mission Road/ Beech Road Junction				
50	291	351	3.36	Yes
51	244	255	0.72	Yes
52	394	388	0.29	Yes
Lewis Road/ College Street Roundabout				
53	254	250	0.28	Yes
54	399	420	1.04	Yes
55	305	330	1.39	Yes
56	660	634	1.03	Yes
57	731	727	0.15	Yes
58	603	609	0.24	Yes
59	671	686	0.59	Yes
60	528	521	0.29	Yes
61	658	678	0.78	Yes

Journey Time Validation

- 2.17 Limited journey time surveys data was available, however anecdotal information and measured data was available to calibrate the model. This included the northbound route along Muckross Road from the south of Woodlawn Road to The Hahah. This is a key link in relation to the proposed future assessments. This was to establish the validity of speed-flow curves and traffic signal junction delays, assisting in the localised calibration of the Model.
- 2.18 Comparisons of observed and modelled journey times are shown in Table 3. The standard criterion for goodness of fit between average observed and modelled journey times is a difference of approximately 15%. This deviation was assessed and was considered acceptable considering the travel patterns and composition of the Tourist Town.

Table 3 - Comparison of Journey Times

<i>Route</i>	<i>Observed</i>		<i>Modelled</i>		<i>% Diff.</i>
	<i>Time</i>	<i>Speed</i>	<i>Time</i>	<i>Speed</i>	
	<i>(min:sec)</i>	<i>(Km/hr)</i>	<i>(min:sec)</i>	<i>(Km/hr)</i>	
N71 Muckross Road/ Woodlawn Road junction	14:00	2.79	16:06	2.41	-15.5%

- 2.19 Modelling the N71 Muckross Road/ Woodlawn Road junction to The Hahah route to represent observed delays was challenging due the nature of traffic within Killarney. Tourist traffic would typically be unaware of alternative routes from the N71 to the N22 Cork Road such as via Woodlawn Road/ Ballycasheen Road, or other routes further south. The increased delays to compare with those observed, was required for the assignment of traffic in the base year model to be consistent with recorded traffic volumes.

Output Traffic Volumes

- 2.20 Traffic volume outputs have been presented as both actual and demand volumes. The actual traffic volumes represent the actual volume likely to travel on a given link during the peak hours modelled. The demand flow represents the volume that wishes to travel the same link in the peak hour. In the case where the demand flow exceeds the actual flow, then not all vehicles wishing to travel on a link have done so. This is due to capacity restraint at some point in the network. The restraint is not necessarily the link itself, but may be at a preceding, or subsequent, link or junction on a route. In such a case, the demand would exceed the capacity of a link, but the Volume to Capacity (V/C) ratio is lower. The V/C ratio presented represents the actual traffic flow predicted divided by the link capacity, for a given link.
- 2.21 Queuing occurs where demand exceeds capacity through a link, or junction. If there is not sufficient queuing capacity on a link, the queue will extend to a previous link and will result in queuing on the preceding link.
- 2.22 Key locations for the infrastructure assessments are outlined in the relevant subsequent sections.

3.0 FORECAST YEAR MODEL

- 3.1 In order to assess the forecast year traffic volumes for future road types, junction types or developments, a future year model was developed. The forecast year flows are in the form of 5.00 to 6.00 pm peak hour vehicles.
- 3.2 As outlined in the Brief, two forecast year models were developed as forecast years 2017 and 2021.
- 3.3 The forecast year models provide Killarney Municipal District and Kerry County Council with future year peak hour traffic models, which have been used to assess proposed traffic management measures, including the likely volumes on the proposed Link Roads, as outlined in the Brief.

Forecast Years Models Methodology

- 3.4 The methodology employed to establish future year models includes the following stages:
- Extract trip distribution for the Study Area from the validated base year traffic model;
 - Update the distributions to include the final land-use projections for the Study Area, as appropriate
 - Determine the projected quantities of development which will be in each of the new model zones, for each of the forecast years, as required;
 - Build each forecast year matrix according to projected trip attraction rates using the established base year matrix and data;
 - Build the forecast year network to include the 'do-minimum' option, as required;
 - Assign the forecast year matrices to the various future year networks and the do-minimum scenario;
 - Extract PM peak hour data; and
 - Determine predicted data for each forecast year, for both do-minimum scenarios and do-something scenarios.

Forecast Year Matrix Development

- 3.5 The proposed forecast years are 2017 and 2021. The 2017 forecast year model is an appropriate year for testing short-term strategies while the 2021 is being used for medium-term strategies.

Methodology

- 3.6 The methodology for developing a forecast year model is as follows:
- Build do-minimum forecast year SATURN network, for the forecast years 2017 and 2021;
 - Build forecast years matrix for the years 2017 and 2021, using forecast year projections, and forward planning information;
 - Assign forecast year matrices; and
 - Assess forecast year assignments.

Forecast Years Matrices

- 3.7 The Killarney Traffic Model forecast year matrices were developed using the following methodology:
- Develop, validate and calibrated the base year PM matrix as outlined previously;
 - Determine forecast year planning and growth data; and
 - Trips attracted to areas external to the Study Area will also increase to each of the forecast years. This level of growth has been applied in accordance with TII projections, as published in their Project Appraisal Guidelines Unit 5.5 for the Southwest Region using medium growth values.

Forecast Year Testing

- 3.8 The Traffic Study assesses and will recommend traffic management schemes, where appropriate. These schemes were agreed with the Client and testing is detailed within this Report. Data output locations are shown diagrammatically in Appendix A of this Report.
- 3.9 The forecast year model will be used as follows:
- 2017 Medium Term Improvements; and
 - 2021 Long Term Improvements

- 3.10 The objective of the forecast testing is to assess proposed schemes, with respect to appropriate criterion and parameters.

Forecast Year Networks – Do Minimum

- 3.11 The forecast year do-minimum networks are based on the base year 2015 road layout, as agreed. It is understood that there are no current committed proposals which would significantly affect traffic volumes on the local road network.

4.0 FORECAST YEARS DO MINIMUM OPERATIONS

4.1 The following modelling assessment outputs for the 2017 and 2021 forecast years do-minimum scenarios are provided in Appendix B and C, respectively:

- Forecast 2017 and 2021 peak hour traffic flows on the Study Area road network, for each direction; and
- The predicted 2017 and 2021 forecast year road link volume/capacity (V/C) ratios, in each direction, for the Study Area road network. A V/C ratio of 90% is considered to represent practical capacity.

4.2 In addition, detailed comparisons between both the 2017 and 2021 forecast years do-minimum scenarios with the 2015 base year scenario, are also provided in Appendix B and C, for the following modelling assessment outputs:

- The predicted changes in 2017 and 2021 do-minimum peak hour traffic volumes on the Study Area road network, for each direction, compared to the 2015 base year scenario; and
- The predicted 2017 and 2021 forecast year road link volume/capacity (V/C) ratios, in each direction, for the Study Area road network. A V/C ratio of 90% is considered to represent practical capacity; and
- The predicted changes in 2017 and 2021 do-minimum V/C ratios, compared to the 2015 base year scenario.

4.3 The predicted 2017 and 2021 forecast years do-minimum modelling outputs and their respective comparison with the 2015 base year, detailed in Appendix B and C, are summarised in Table 4, for the Study Area main town centre and distributor road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 3 and 4, respectively, compared to the 2015 base year (blue indicates a decrease in traffic flows, green indicates an increase).

4.4 The Study Area Town centre street and road network, and Town road network, are provided graphically in Figures 5, 6, 7 and 8, in Section 5.0.

2015 Base Year V/C Ratios

- 4.5 The 2015 base year model indicates that Mission Road, Park Road at the Park Road Roundabout, Muckross Road south of Woodlawn Road, High Street (north) and Ross Road at Muckross Road are operating at capacity, in excess of practical capacity for the modelled peak hour traffic flows.

Figure 3 – 2017 Do Minimum Traffic Flow Changes

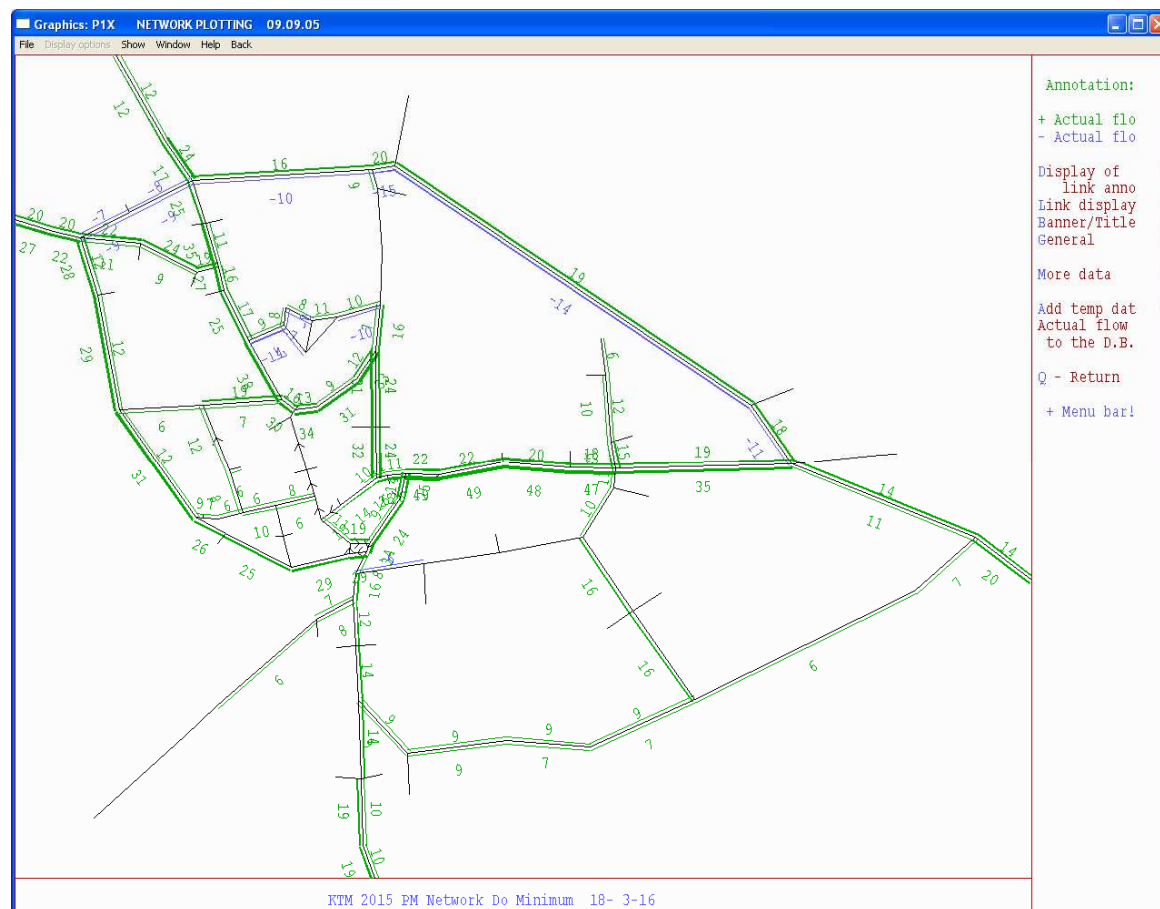


Figure 4 – 2021 Do Minimum Traffic Flow Changes

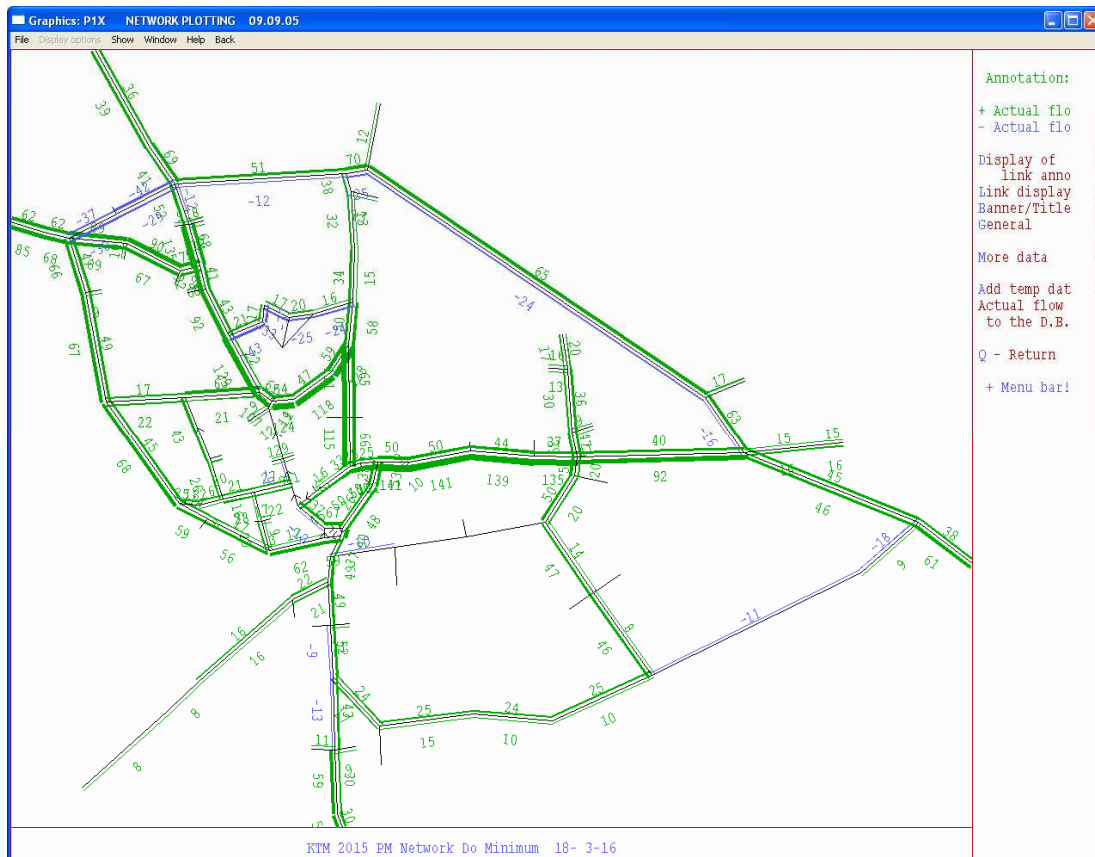


Table 4 – Summary of Do Minimum Peak Hour Modelling Forecasts

Road/Street	Traffic Volumes			V/C Ratio (%)	
	2015	2017	Change (+/-)	2015	2017
High Street	577	577	0	100	101
Plunkett Street	409	421	+12	55	57
New Street Upper	344	358	+14	19	20
College Road	397	414	+17	43	44
New Road	447	473	+26	63	70
Mission Road	1,079	1,110	+31	105	105
Port Road	1,105	1,148	+43	44	47
Park Road	1,563	1,633	+70	53	54
Muckross Road	1,421	1,432	+11	111	111
St Anne's Road	557	598	+41	5	6
Road/Street	Traffic Volumes			V/C Ratio (%)	
	2015	2021	Change (+/-)	2015	2021
High Street	577	573	-4	100	101
Plunkett Street	409	454	+45	55	61
New Street Upper	344	393	+49	19	22
College Road	397	462	+65	43	48
New Road	447	530	+83	63	89
Mission Road	1,079	1,154	+75	105	107
Port Road	1,105	1,219	+114	44	50
Park Road	1,563	1,753	+190	53	56
Muckross Road	1,421	1,451	+30	111	111
St Anne's Road	557	723	+166	5	6

2017

- 4.6 Within the town centre, the forecast 2017 peak hour traffic flows are unchanged on High Street and 12 vehicles (3%) higher on Plunkett Street, compared to the 2015 base year traffic flows. The forecast 2017 peak hour traffic flows are higher on New Street Upper by 14 vehicles (4%) and on College Road by 17 vehicles (4%), compared to 2015.
- 4.7 The forecast 2017 peak hour traffic flows on New Road and Mission Road are 26 vehicles (6%) and 31 vehicles (3%) higher, respectively, compared to the 2015 base year.
- 4.8 The forecast 2017 peak hour traffic flows on the Park Road, Muckcross Road and St Anne's Road town centre distributor routes are 70 vehicles (4%), 11 vehicles (1%) and 41 vehicles (7%) higher, respectively, compared to the 2015 base year.

2021

- 4.9 Within the town centre, the forecast 2021 peak hour traffic flows are virtually unchanged on High Street and 45 vehicles (11%) higher on Plunkett Street, compared to the 2015 base year traffic flows. The forecast 2021 peak hour traffic flows are higher on New Street Upper by 49 vehicles (14%) and on College Road by 65 vehicles (16%), compared to 2015.
- 4.10 The forecast 2021 peak hour traffic flows on New Road and Mission Road are 83 vehicles (19%) and 75 vehicles (7%) higher, respectively, compared to the 2015 base year.
- 4.11 The forecast 2021 peak hour traffic flows on the Park Road, Muckcross Road and St Anne's Road town centre distributor routes are 190 vehicles (12%), 30 vehicles (2%) and 166 vehicles (30%) higher, respectively, compared to the 2015 base year.

V/C Ratios

- 4.12 The network locations operating at capacity in 2015, identified in Section 4.5 above, would continue to operate at capacity, in excess of practical capacity in 2017 and 2021 for the forecast do minimum peak hours. No additional network locations would exceed practical capacity for the forecast 2017 and 2021 peak hour traffic flows.

5.0 ROAD LINK AND TRAFFIC MANAGEMENT SCHEMES

5.1 The new road links and town centre traffic management schemes assessed using the Study 2017 and 2021 forecast years model are as follows:

New Road Links

- Inner Relief Road linking High Street and New Street via Boreen Na Goun;
- Gaelscoil Road linking Deerpark with the N22 Killarney Bypass;
- Southern Outer Relief Road linking Cork Road (N22) and Muckcross Road (N71); and
- The Glebe Link Road.

Traffic Management Schemes

- Main Street pedestrianised;
- Main Street and Plunkett Street pedestrianised;
- New Street Upper one-way eastbound;
- New Street Upper one-way westbound; and
- New Road one-way eastbound; and
- Banned Right Turns at the N22 Killarney Bypass/ Upper Lewis Road.

Inner Relief Road + Traffic Management Schemes

- Inner Relief Road linking High Street and New Street via Boreen Na Goun plus Main Street pedestrianised; and
- Inner Relief Road linking High Street and New Street via Boreen Na Goun plus Main Street and Plunkett Street pedestrianised.

5.2 The Study Area Town centre street and road network, and Town road network, are provided graphically in Figures 5, 6, 7 and 8. The locations of the foregoing new road links and town centre traffic management schemes are also shown, as appropriate. The Southern Outer Relief Road has no current proposed design alignment, and is envisaged to extend on the southern part of the Study Area, south of Woodlawn Road, between the N22 and N71.

Modelling Assessments Outputs

- 5.3 The following modelling assessment outputs are provided in Appendix B and C for each of the new road link and traffic management schemes modelled, and for the do-minimum scenario:
- The predicted 2017 and 2021 forecast year peak hour traffic volumes on the Study Area road network, for each direction;
 - The predicted changes in 2017 and 2021 forecast year peak hour traffic volumes on the Study Area, for each direction, compared to the equivalent year do-minimum scenario;
 - The predicted 2017 and 2021 forecast year road link volume/capacity (V/C) ratios, in each direction, for the Study Area road network. A V/C ratio of 90% is considered to represent practical capacity; and
 - The predicted changes in 2017 and 2021 forecast year V/C ratios, compared to the equivalent do-minimum scenario.
- 5.4 The modelling assessments are a relative assessment of each scheme. The impacts of preferred schemes could be mitigated by the implementation of appropriate associated local traffic management measures, including junction priorities and layouts.

Figure 5 – Town Centre Street Network



Figure 6 – Town Centre Road Network

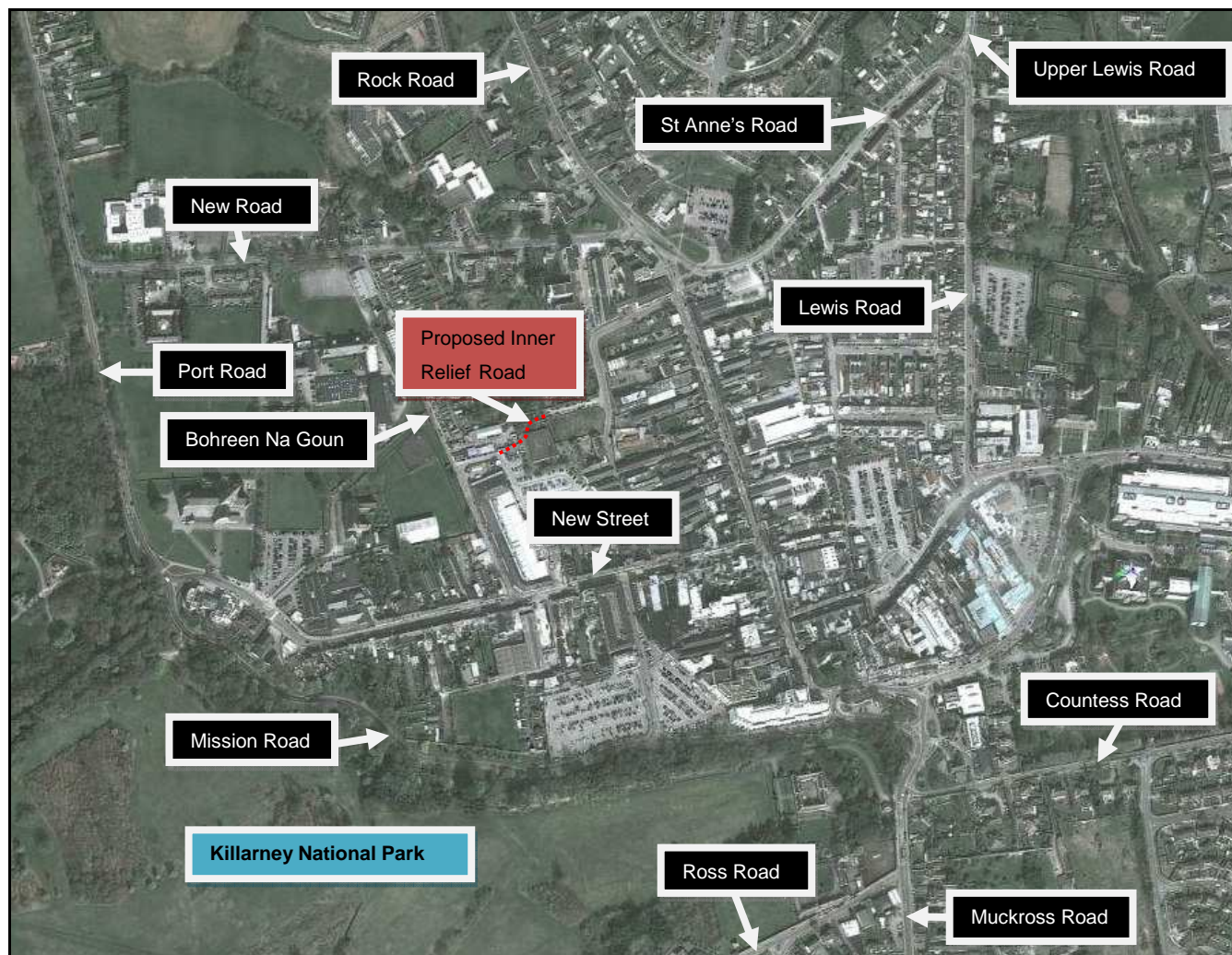


Figure 7 – Town Road Network (1 of 2)

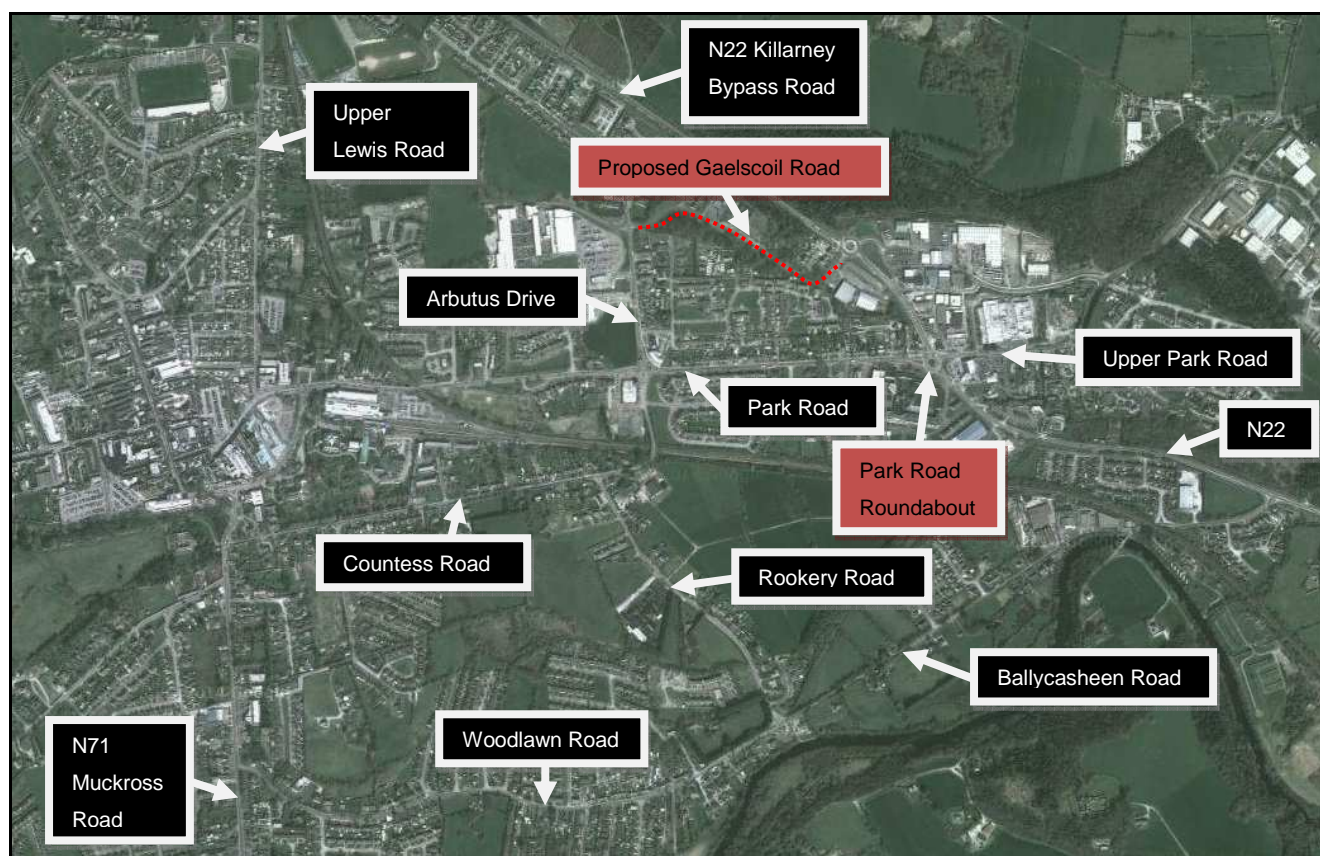
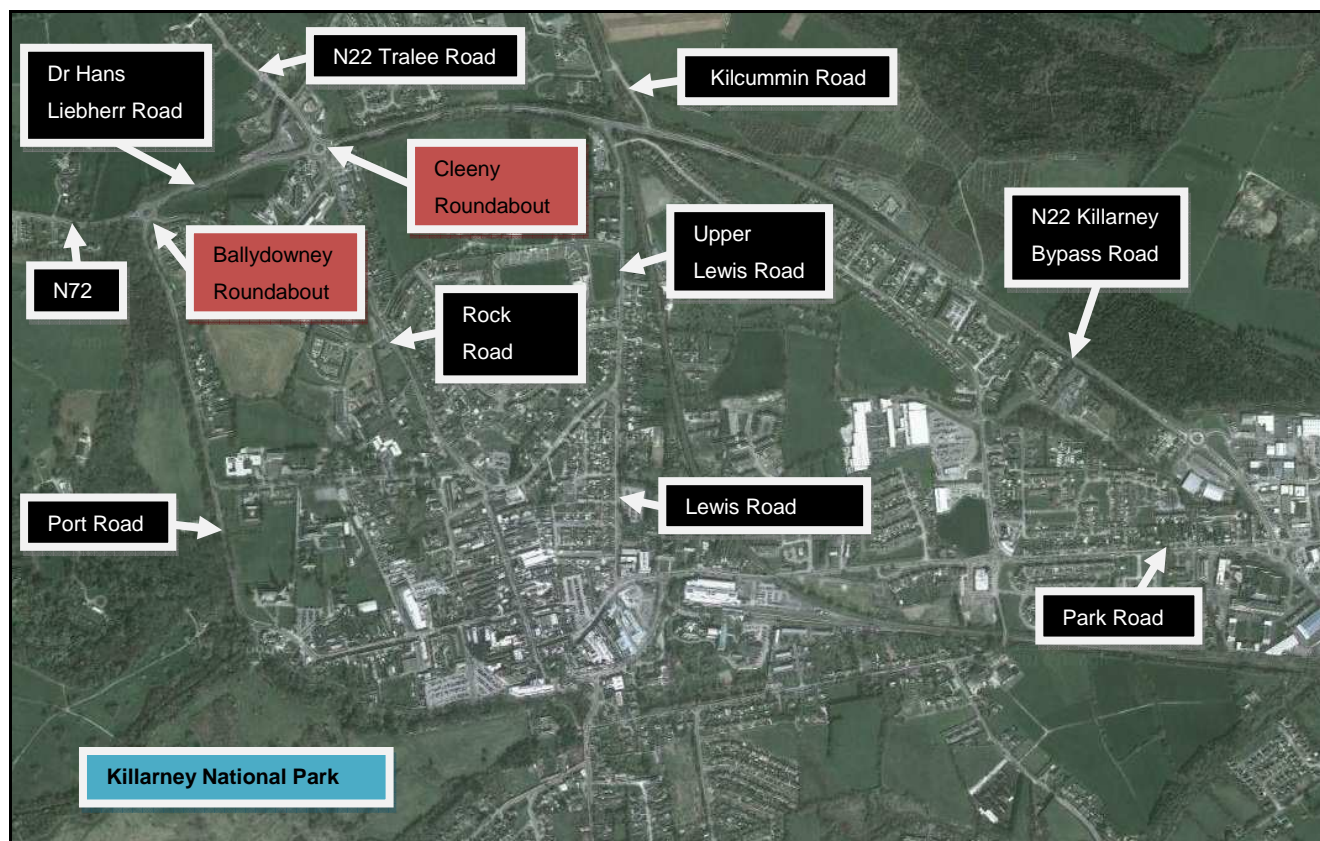


Figure 8 – Town Road Network (2 of 2)



6.0 NEW ROAD LINKS

Inner Relief Road (High Street/New Street via Boreen Na Goun)

- 6.1 The predicted 2017 and 2021 modelling outputs for the proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun, detailed in Appendix B and C, are summarised hereunder in Table 5, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 9 and 10, respectively, for the proposed Inner Relief Road (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 9 – Inner Relief Road 2017 Traffic Flow Changes

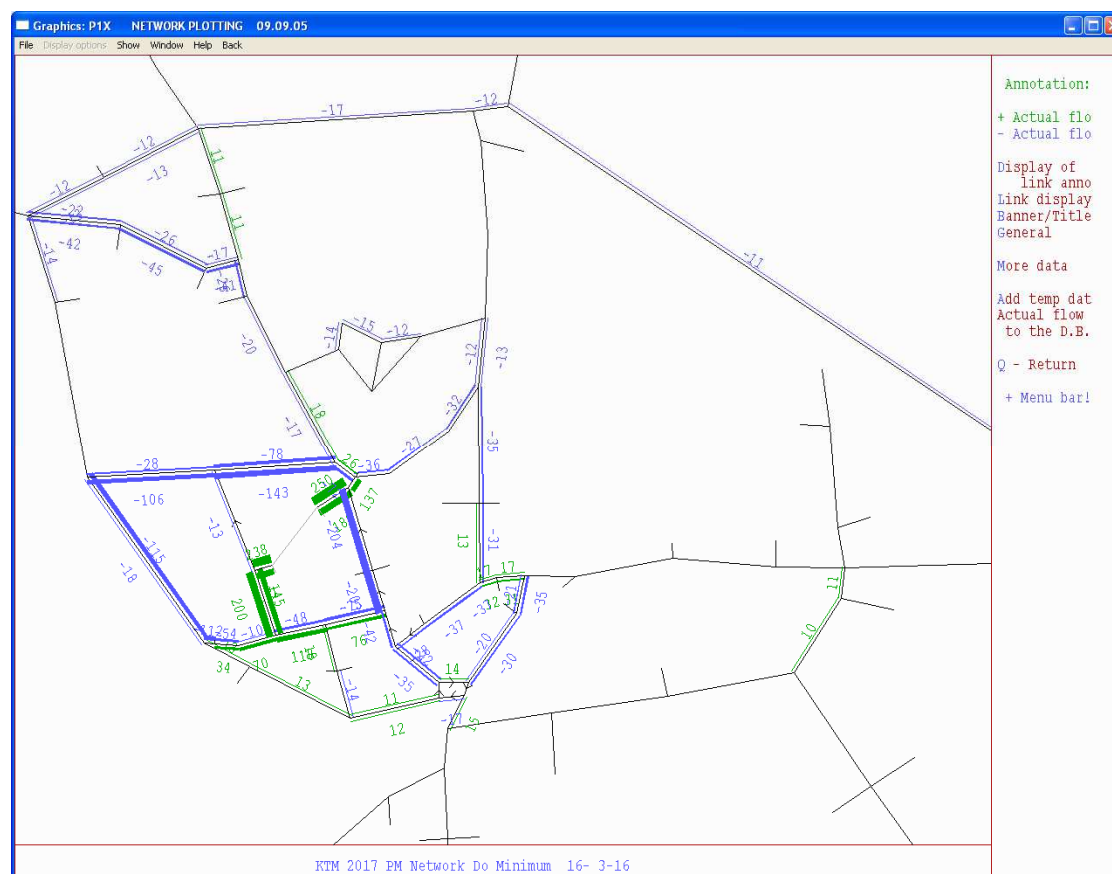


Figure 10 – Inner Relief Road 2021 Traffic Flow Changes

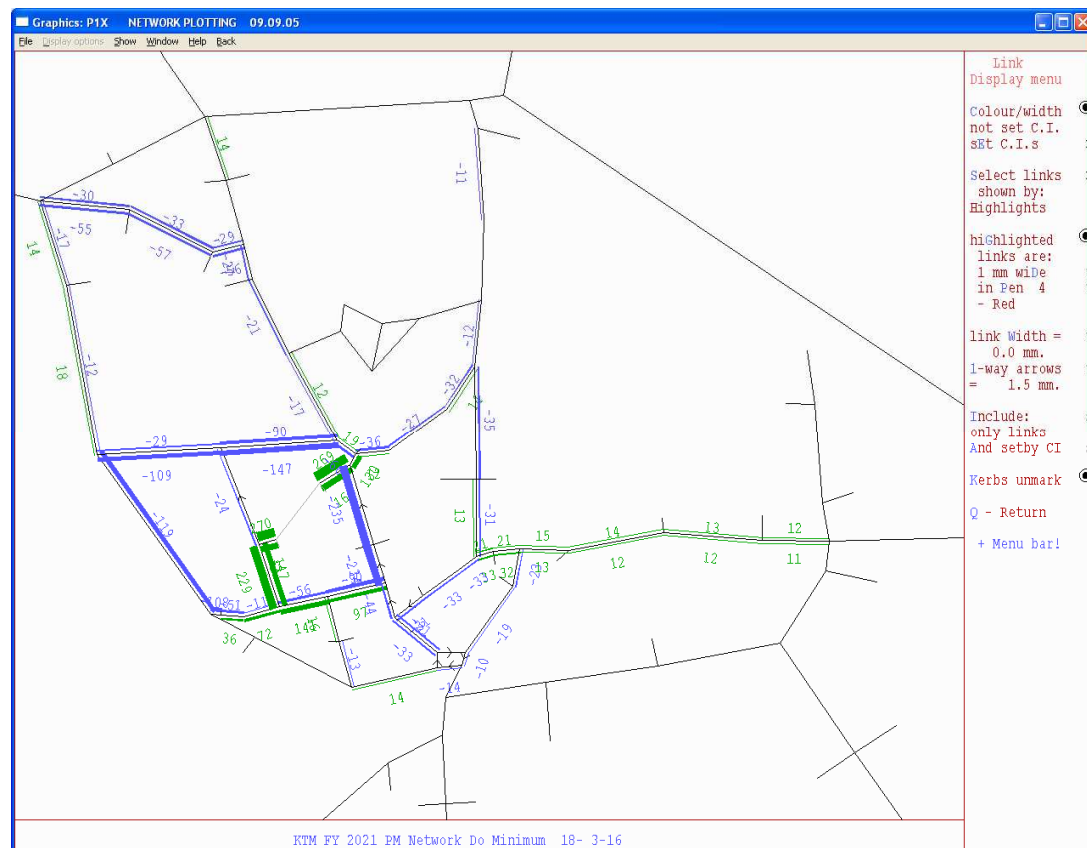


Table 5 – Summary of Inner Relief Road (IRR) Modelling Forecasts

2017 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without IRR	With IRR	Change (+/-)	Without IRR	With IRR
High Street	577	373	-204	101	103
New Street Upper	358	360	+2	20	28
New Road	473	252	-221	70	59
Port Road	1,148	1,015	-133	47	44
St Margaret's Road	324	260	-64	27	21
Bohreen Na Goun	327	672	+345	42	81
Inner Relief Road	269	698	+430	22	85
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without IRR	With IRR	Change (+/-)	Without IRR	With IRR
High Street	573	338	-235	101	105
New Street Upper	393	401	+7	22	31
New Road	530	293	-237	89	75
Port Road	1,219	1,090	-128	50	49
St Margaret's Road	449	363	-86	37	28
Bohreen Na Goun	342	718	+376	43	84
Inner Relief Road	282	712	+430	23	100

2017

- 6.2 During 2017, the provision of the proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun, would reduce peak hour traffic flows on High Street and New Road by 204 vehicles (35%) and 221 vehicles (47%), respectively. Elsewhere during 2017, the proposed Inner Relief Road would reduce peak hour traffic flows by 133 vehicles (12%) on Port Road, and by 64 vehicles (20%) on St Margaret's Road. Peak hour two-way traffic flows on New Street would be virtually unchanged, with an increase of 76 vehicles westbound and a decrease of 74 vehicles eastbound.
- 6.3 The V/C ratios on New Street, New Road, Port Road and St Margaret's Road would remain well within practical capacity. The V/C ratio for High Street would remain at capacity, with its critical capacity informed by the network junctions at its north end.
- 6.4 The provision of the Inner Relief Road linking High Street and New Street via Boreen Na Goun, would increase 2017 peak hour traffic flows on Boreen Na Goun by 345 vehicles (106%), to 672 vehicles, which would be within practical capacity, with a highest V/C ratio of 81%. The Inner Relief Road would have highest 2017 peak hour traffic flows of 698 vehicles and a V/C ratio of 85%, at its north east end.

2021

- 6.5 During 2021, the provision of the proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun, would reduce peak hour traffic flows on High Street and New Road by 235 vehicles (41%) and 237 vehicles (45%), respectively. Elsewhere during 2021, the proposed Inner Relief Road would reduce peak hour traffic flows by 128 vehicles (11%) on Port Road, and by 86 vehicles (19%) on St Margaret's Road. Peak hour two-way traffic flows on New Street would be virtually unchanged, with an increase of 97 vehicles westbound and a decrease of 90 vehicles eastbound.
- 6.6 The V/C ratios on New Street, New Road, Port Road and St Margaret's Road would remain well within practical capacity. The V/C ratio for High Street would remain at capacity, with its critical capacity informed by the network junctions at its north end.

- 6.7 The provision of the Inner Relief Road linking High Street and New Street via Boreen Na Goun, would increase 2021 peak hour traffic flows on Boreen Na Goun by 376 vehicles (110%), to 718 vehicles, which would be within practical capacity, with a highest V/C ratio of 84%. The Inner Relief Road would operate at capacity with a highest 2021 peak hour traffic flows of 712 vehicles and a V/C ratio of 100%, at its north east end.

Gaelscoil Road (Deerpark/N22 Killarney Bypass Link)

- 6.8 The predicted 2017 and 2021 modelling outputs for the proposed Gaelscoil Road (Deerpark/N22 Killarney Bypass Link), detailed in Appendix B and C, are summarised hereunder in Table 6, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 11 and 12, respectively, for the proposed Gaelscoil Road (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 11 – Gaelscoil Road 2017 Traffic Flow Changes

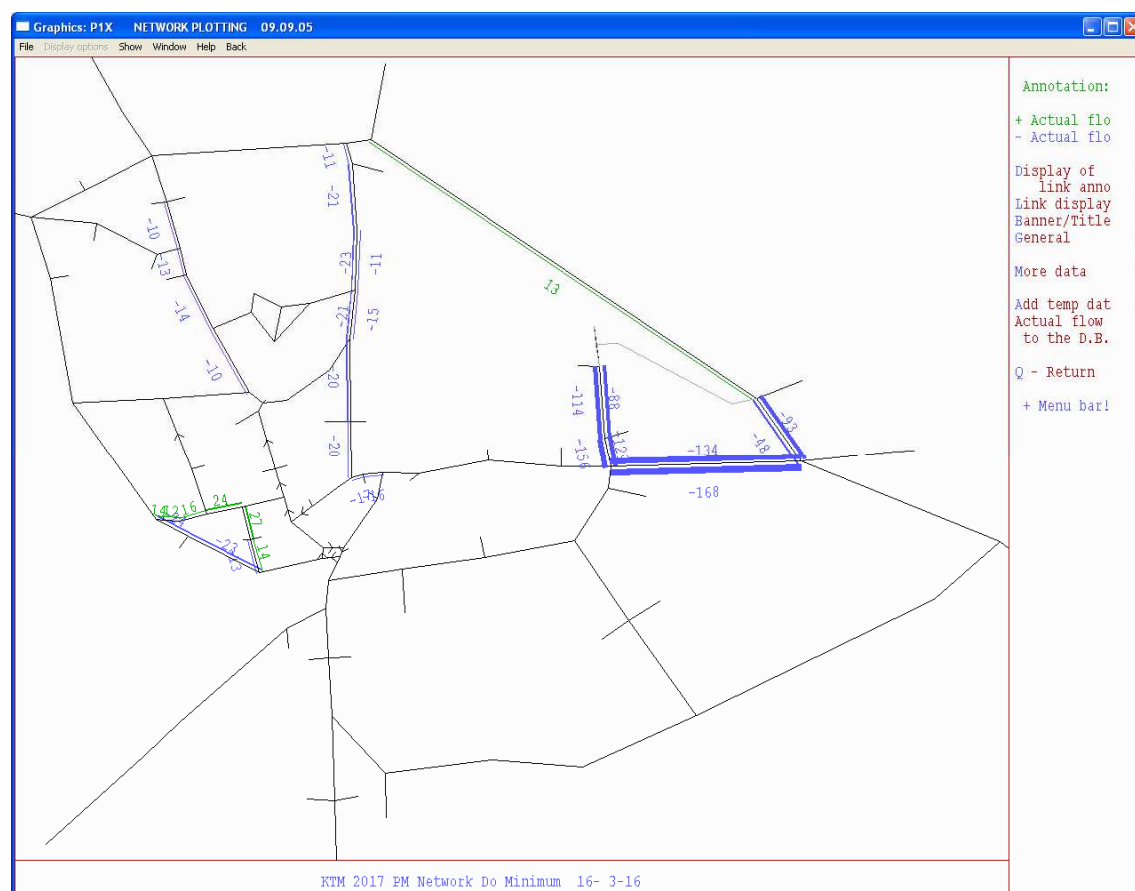


Figure 12 – Gaelscoil Road 2021 Traffic Flow Changes

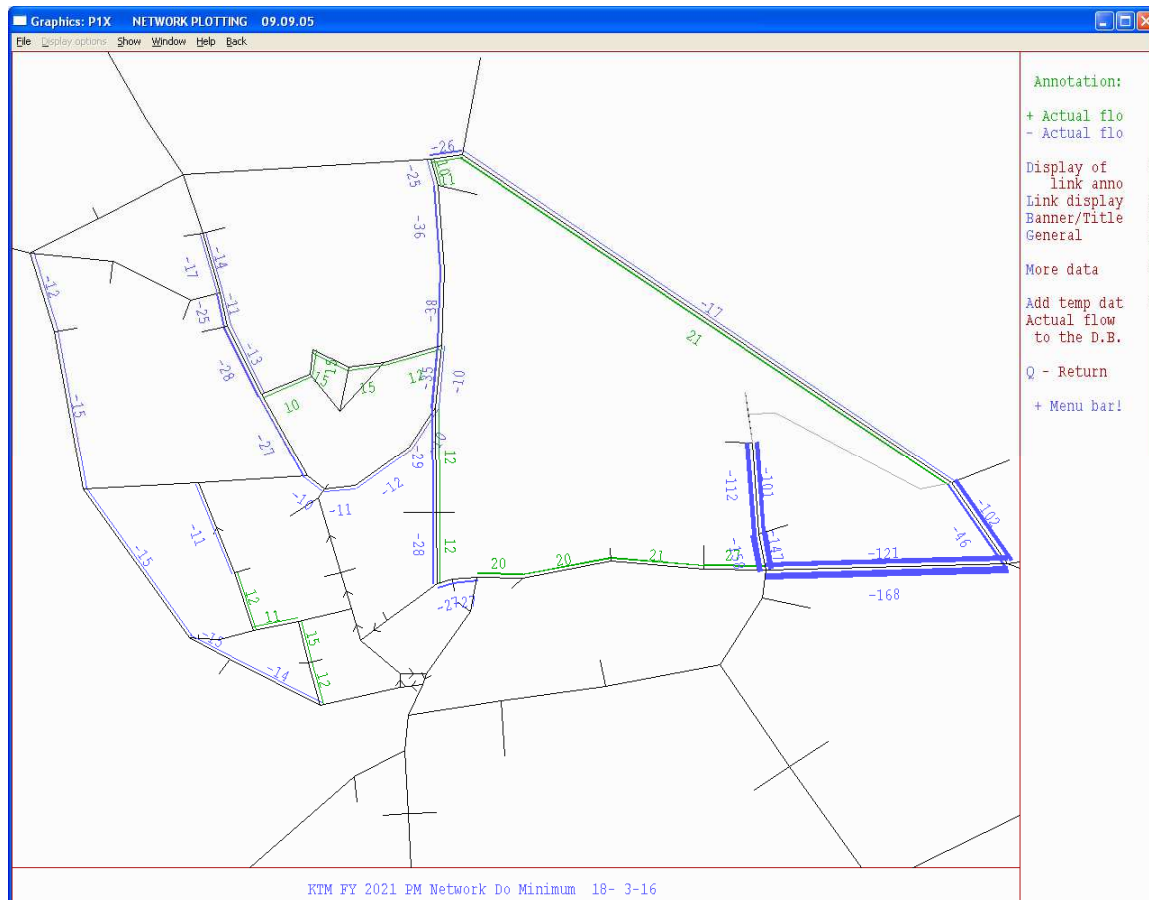


Table 6 – Summary of Gaelscoil Road Modelling Forecasts

2017 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without Gaelscoil Road	With Gaelscoil Road	Change (+/-)	Without Gaelscoil Road	With Gaelscoil Road
Park Road	1,333	1,031	-303	100	89
Lewis Road	371	342	-29	27	26
N22 Killarney Bypass	1,359	1,218	-141	73	65
Arbutus Drive	1,140	855	-285	69	56
Gaelscoil Road	N/A	397	+397	N/A	24
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without Gaelscoil Road	With Gaelscoil Road	Change (+/-)	Without Gaelscoil Road	With Gaelscoil Road
Park Road	1,410	1,122	-288	102	93
Lewis Road	412	372	-40	30	27
N22 Killarney Bypass	1,398	1,249	-148	79	66
Arbutus Drive	1,198	893	-305	74	61
Gaelscoil Road	N/A	434	+434	N/A	25

2017

- 6.9 During 2017, the provision of the proposed Gaelscoil Road (Deerpark/N22 Killarney Bypass Link), would reduce peak hour traffic flows on Park Road, locally between Park Road Roundabout and M D O'Shea Roundabout by 303 vehicles (23%). This would reduce the V/C ratio of this section of Park Road from 100% at capacity to just less than practical capacity, at 89%.
- 6.10 The provision of Gaelscoil Road would reduce 2017 peak hour traffic flows locally on the N22 Killarney Bypass Road, between Park Road Roundabout and Deerpark Roundabout, by 141 vehicles (10%). This would reduce the V/C ratio of this section of the N22 Killarney Bypass from 73% to 65%.

- 6.11 2017 peak hour traffic flows on Arbutus Drive, at its junction with Park Road, would reduce locally by 285 vehicles (25%), with the proposed Gaelscoil Road in place.
- 6.12 Gaelscoil Road would have 2017 peak hour traffic flows of 397 vehicles and a V/C ratio of 24%.
- 6.13 Elsewhere during 2017, the proposed Gaelscoil Road would reduce peak hour traffic flows by 29 vehicles (8%) on Lewis Road, which would continue to operate well within practical capacity.

2021

- 6.14 During 2021, the provision of the proposed Gaelscoil Road (Deerpark/N22 Killarney Bypass Link), would reduce peak hour traffic flows on Park Road, locally between Park Road Roundabout and M D O'Shea Roundabout by 288 vehicles (20%). This would reduce the V/C ratio of this section of Park Road from 103% at capacity to just less than practical capacity, at 93%, during 2021.
- 6.15 The provision of Gaelscoil Road would reduce 2021 peak hour traffic flows locally on the N22 Killarney Bypass Road, between Park Road Roundabout and Deerpark Roundabout, by 148 vehicles (11%). This would reduce the V/C ratio of this section of the N22 Killarney Bypass from 79% to 66%.
- 6.16 2021 peak hour traffic flows on Arbutus Drive, at its junction with Park Road, would reduce locally by 305 vehicles (25%), with Gaelscoil Road in place.
- 6.17 Gaelscoil Road would have 2021 peak hour traffic flows of 434 vehicles and a V/C ratio of 25%.
- 6.18 Elsewhere during 2021, the proposed Gaelscoil Road would reduce peak hour traffic flows by 40 vehicles (10%) on Lewis Road, which would continue to operate well within practical capacity.

Southern Outer Relief Road linking Cork Road (N22) and Muckcross Road (N71)

6.19 The predicted 2017 and 2021 modelling outputs for the proposed Southern Outer Relief Road linking Cork Road (N22) and Muckcross Road (N71), detailed in Appendix B and C, are summarised hereunder in Table 7, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 13 and 14, respectively, for the proposed Southern Outer Relief Road (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 13 – Southern Outer Relief Road 2017 Traffic Flow Changes



Figure 14 – Southern Outer Relief Road 2021 Traffic Flow Changes

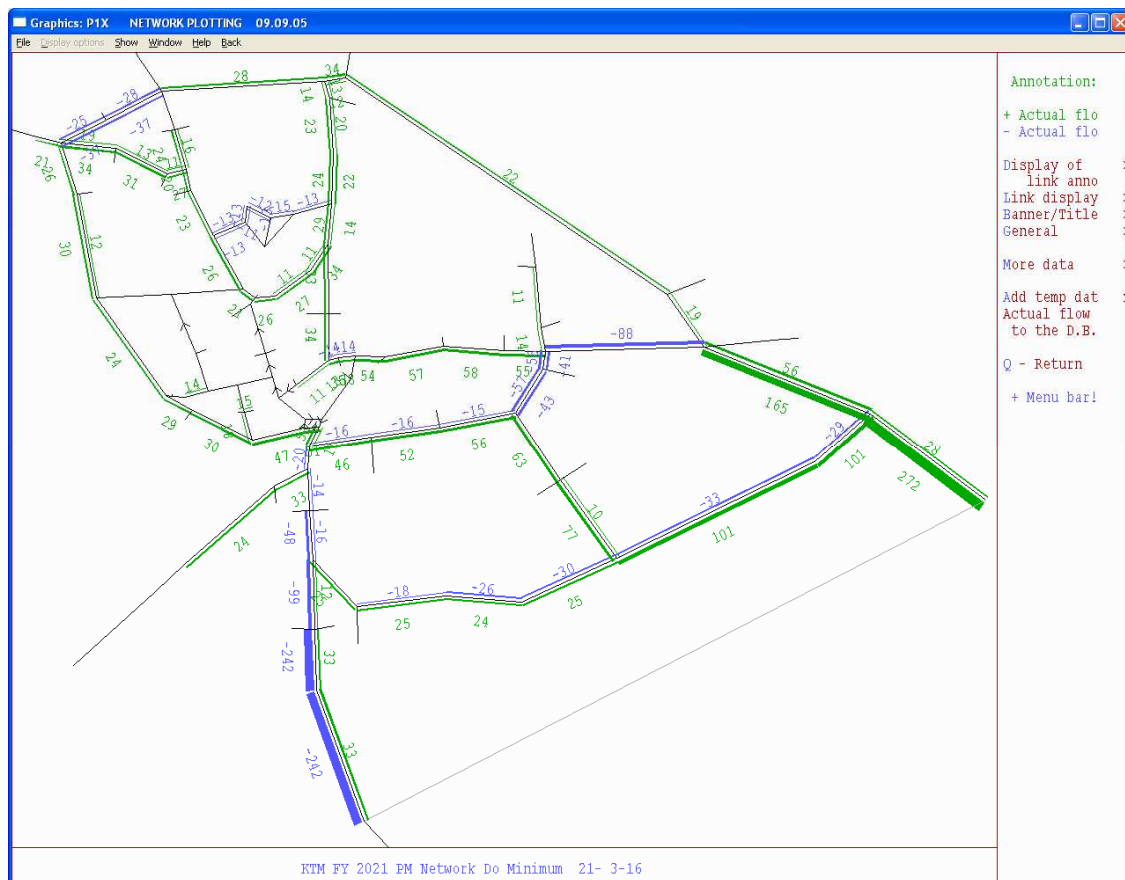


Table 7 – Summary of Southern Outer Relief Road Modelling Forecasts

2017 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without Outer Relief Road	With Outer Relief Road	Change (+/-)	Without Outer Relief Road	With Outer Relief Road
Park Road	1,333	1,285	-48	100	103
Muckross Road	1,432	1,319	-113	111	49
Southern Outer Relief Road	N/A	233	+233	N/A	17
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without Outer Relief Road	With Outer Relief Road	Change (+/-)	Without Outer Relief Road	With Outer Relief Road
Park Road	1,410	1,319	-91	102	105
Muckross Road	1,451	1,363	-88	111	49
Southern Outer Relief Road	N/A	274	+274	N/A	78

2017

- 6.20 During 2017, the provision of the proposed Southern Outer Relief Road linking Cork Road (N22) and Muckross Road (N71) would reduce peak hour traffic flows on Park Road, locally between Park Road Roundabout and Deerpark Roundabout by 48 vehicles (4%). This section of Park Road would continue to operate at capacity both with and without the proposed Outer Relief Road.
- 6.21 The Southern Outer Relief Road would reduce 2017 peak hour traffic flows on Muckross Road, immediately south of its Woodlawn Road junction, by 113 vehicles (8%).
- 6.22 The Southern Outer Relief Road would have 2017 peak hour traffic flows of 233 vehicles and a V/C ratio of 17%.

2021

- 6.23 During 2021, the provision of the proposed Southern Outer Relief Road linking Cork Road (N22) and Muckross Road (N71) would reduce peak hour traffic flows on Park Road, locally between Park Road Roundabout and Deerpark Roundabout by 91 vehicles (6%). This section of Park Road would continue to operate at capacity both with and without the proposed Outer Relief Road.
- 6.24 The Southern Outer Relief Road would reduce 2021 peak hour traffic flows on Muckross Road, immediately south of its Woodlawn Road junction, by 88 vehicles (6%).
- 6.25 The Southern Outer Relief Road would have 2021 peak hour traffic flows of 274 vehicles and a V/C ratio of 78%.

Glebe Link Road

- 6.26 The predicted 2017 and 2021 modelling outputs with the proposed Glebe Link Road in place, detailed in Appendix B and C, are summarised in Table 8, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 15 and 16, respectively, for the proposed Glebe Link Road (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 15 – Glebe Link Road 2017 Traffic Flow Changes

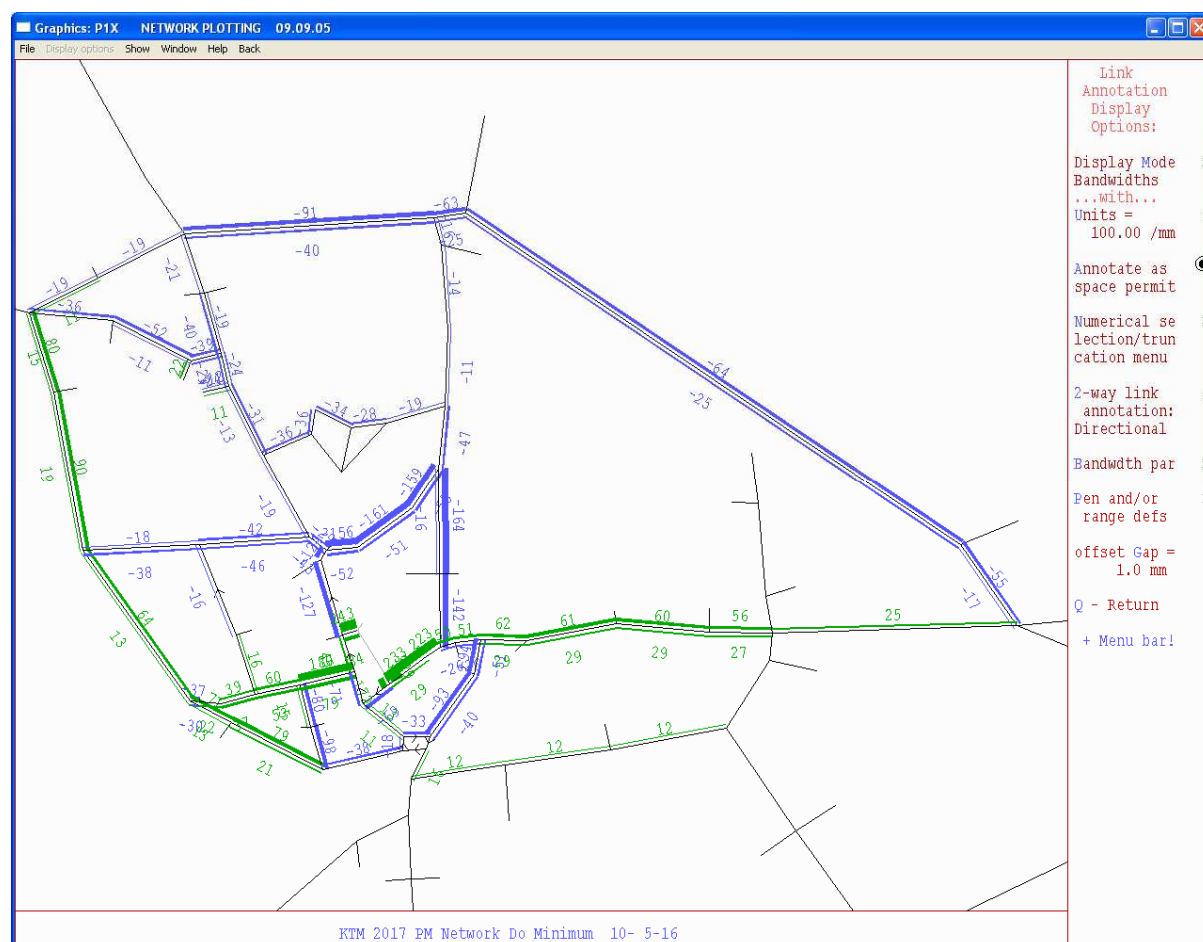


Figure 16 – Glebe Link Road 2021 Traffic Flow Changes

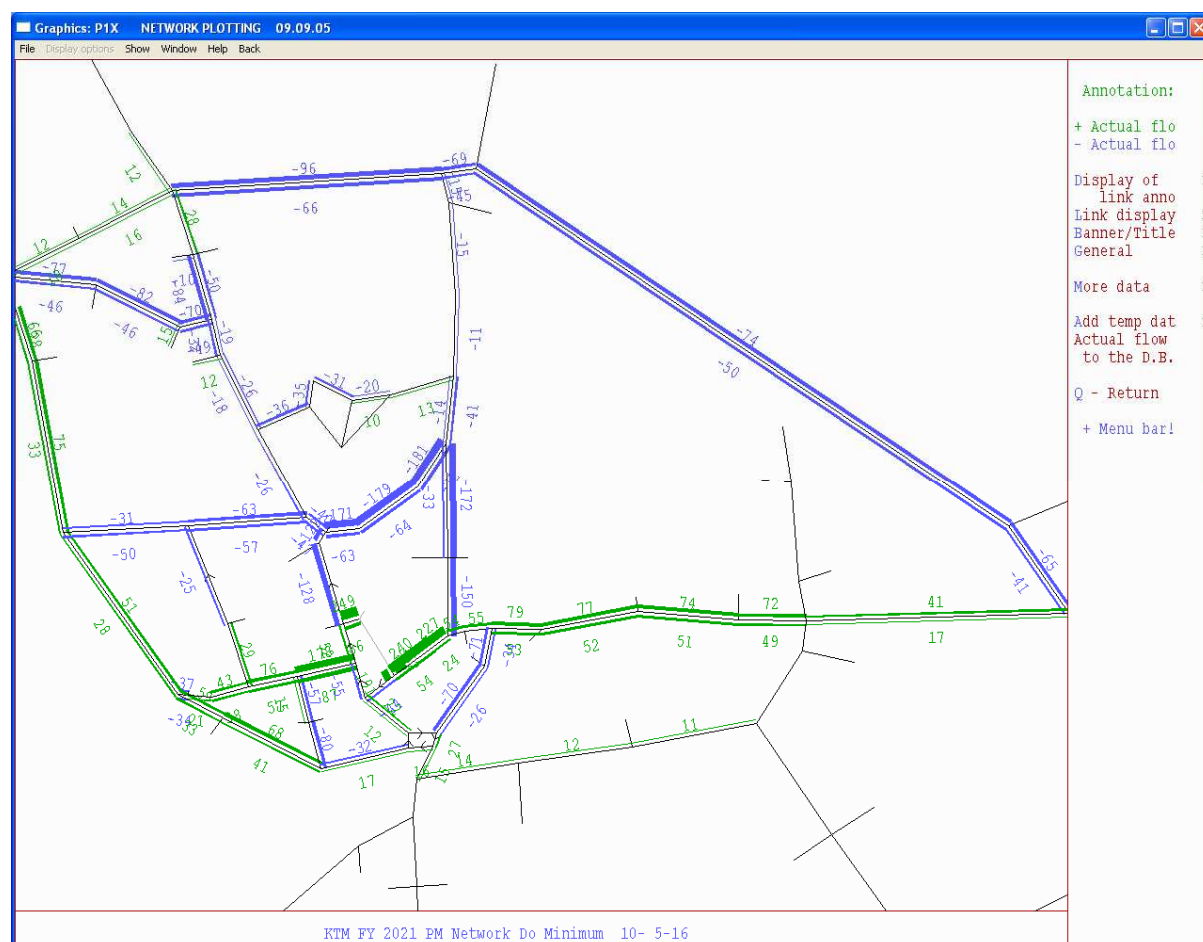


Table 8 – Summary of Glebe Link Road Modelling Forecasts

2017 Peak Hour					
Road/ Street	Traffic Volumes			V/C Ratio (%)	
	Without Glebe Link Road	With Glebe Link Road	Change (+/-)	Without Glebe Link Road	With Glebe Link Road
St Anne's Road	598	386	-212	6	4
Lewis Rd, South of St Anne's Road	910	729	-181	82	61
Mission Road	1,109	1,072	-37	105	97
High Street	577	450	-127	101	52
Plunkett Street	421	353	-69	57	48
N22 Killarney Bypass	1,214	1,124	-89	39	37
Park Road	1,633	1,723	+89	54	61
College Road	414	677	+252	39	21
Port Road	1148	1226	+77	47	48
New Street Upper	358	618	+259	20	38
Glebe Link Road	N/A	659	N/A	N/A	82
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without Glebe Link Road	With Glebe Link Road	Change (+/-)	Without Glebe Link Road	With Glebe Link Road
St Anne's Road	723	480	-244	6	4

Lewis Rd, South of St Anne's Road	1,030	826	-204	88	65
Mission Road	1,154	1,138	-15	107	101
High Street	573	446	-128	101	52
Plunkett Street	454	409	-44	61	55
N22 Killarney Bypass	1,249	1125	-124	56	49
Park Road	1,753	1,882	+129	56	60
College Road	462	756	+294	48	58
Port Road	1,218	1,298	+79	50	52
New Street Upper	393	658	+264	22	39
Glebe Link Road	N/A	696	N/A	N/A	86

2017

- 6.27 The predicted two-way traffic volume on the proposed Glebe Link Road would be 659 vehicles, with a maximum V/C ratio of 82%, during 2017.
- 6.28 During 2017, the provision of the proposed Glebe Link Road would increase peak hour traffic flows on Park Road by 89 vehicles. Traffic volumes on College Road would increase by 262 vehicles. Volumes on New Street Upper would increase by 259 vehicles.
- 6.29 During 2017, the proposed Glebe Link Road would increase peak hour traffic flows by 77 vehicles on Port Road.

- 6.30 The provision of the proposed Glebe Link Road would eliminate 181 vehicles on Lewis Road, South of St. Anne's Road and 212 vehicles on St. Anne's Road, during the peak hour. The Glebe Link Road would reduce 2017 peak hour traffic flows on High Street by 127 vehicles. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 52%.
- 6.31 The Glebe Link Road would reduce traffic flows on the N22 Bypass by 89 vehicles (7.3%). Traffic volumes would be reduced on East Avenue and Beech Road.

2021

- 6.32 The predicted two-way traffic volume on the proposed Glebe Link Road would be 696 vehicles, with a maximum V/C ratio of 86%, during 2021.
- 6.33 During 2021, the provision of the proposed Glebe Link Road in place would increase peak hour traffic flows on Park Road by 129 vehicles. Traffic volumes on College Road would increase by 294 vehicles. Volumes on New Street Upper would increase by 264 vehicles.
- 6.34 During 2021, the proposed Glebe Link Road would increase peak hour traffic flows by 79 vehicles on Port Road.
- 6.35 The provision of the proposed Glebe Link Road would eliminate 204 vehicles on Lewis Road, South of St. Anne's Road and 244 vehicles on St. Anne's Road, during the peak hour. The Glebe Link Road would reduce 2021 peak hour traffic flows on High Street by 128 vehicles. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 52%.
- 6.36 The Glebe Link Road would reduce traffic flows on the N22 Bypass by 124 vehicles. Traffic volumes would be reduced on East Avenue and Beech Road.

7.0 TRAFFIC MANAGEMENT SCHEMES

Main Street Pedestrianised

- 7.1 The predicted 2017 and 2021 modelling outputs with Main Street pedestrianised, detailed in Appendix B and C, are summarised in Table 9, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 17 and 18, respectively, for the proposed Main Street pedestrianised scheme (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 17 – Main Street Pedestrianised 2017 Traffic Flow Changes

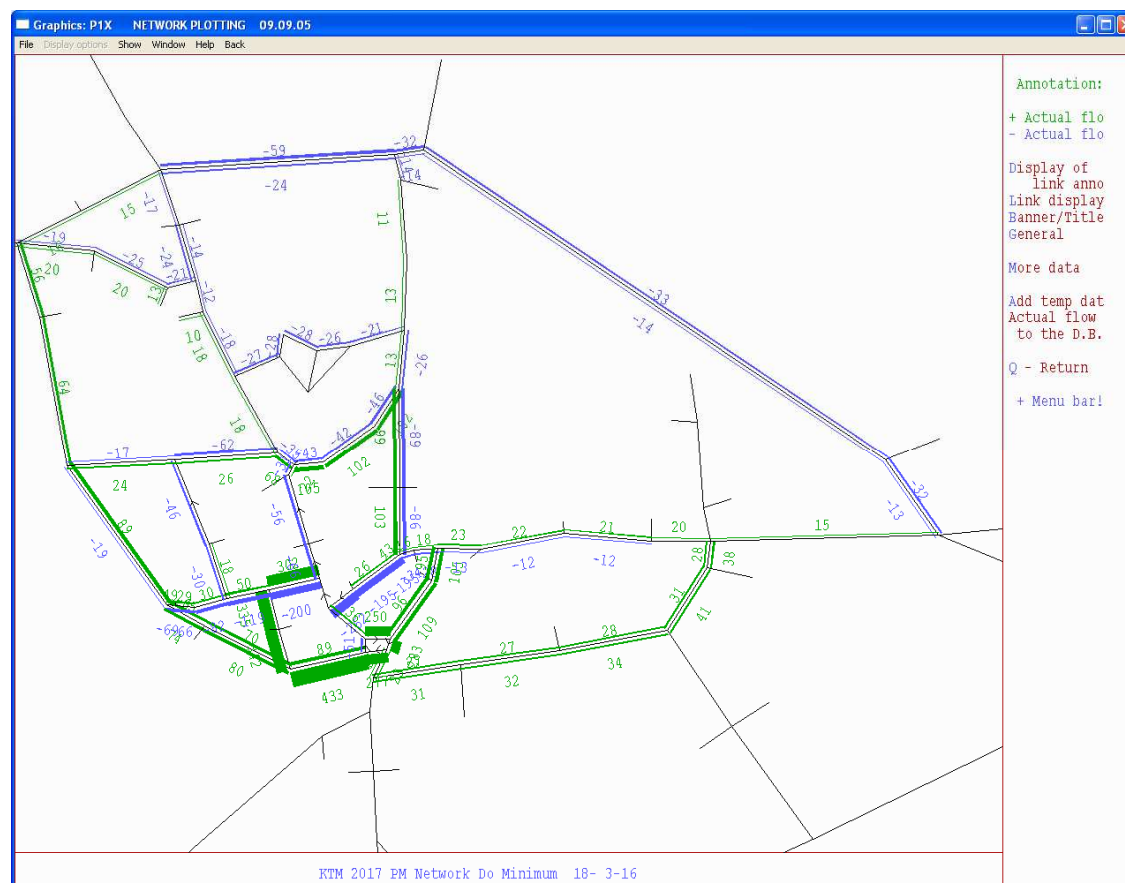


Figure 18 – Main Street Pedestrianised 2021 Traffic Flow Changes

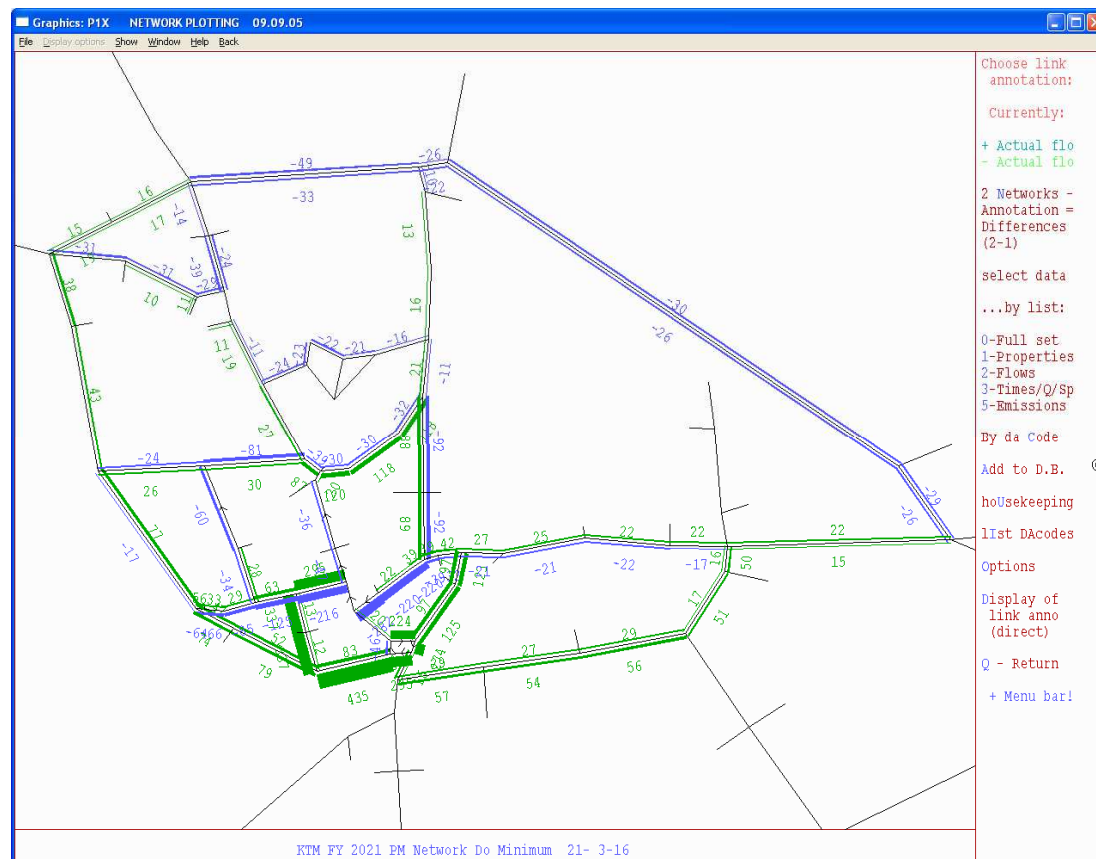


Table 9 – Summary of Main Street Pedestrianised Modelling Forecasts

2017 Peak Hour					
Road/ Street	Traffic Volumes			V/C Ratio (%)	
	Without Pedestrian Main Street	With Pedestrian Main Street	Change (+/-)	Without Pedestrian Main Street	With Pedestrian Main Street
Main Street	494	0	-494	70	N/A
Plunkett Street	421	160	-261	57	2
College Road	414	246	-168	44	24
High Street	577	521	-56	101	62
New Street Upper	358	461	+102	20	5
Mission Road	1,110	1,631	+521	105	102
Port Road	1,148	1,219	+70	47	67
Countess Road	519	577	+59	34	31
St Anne's Road	598	657	+60	6	5
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without Pedestrian Main Street	With Pedestrian Main Street	Change (+/-)	Without Pedestrian Main Street	With Pedestrian Main Street
Main Street	491	0	-491	69	N/A
Plunkett Street	454	172	-282	61	2
College Road	462	264	-198	48	26
High Street	573	537	-36	101	65
New Street Upper	393	473	+79	22	5

Mission Road	1,154	1,672	+518	107	104
Port Road	1,219	1,278	+59	50	47
Countess Road	524	604	+80	35	39
St Anne's Road	723	811	+88	6	6

2017

- 7.2 During 2017, the provision of the proposed Main Street pedestrianised scheme would eliminate 494 vehicles on Main Street during the peak hour. The Main Street pedestrianised scheme would reduce 2017 peak hour traffic flows on Plunkett Street, College Road and High Street by 261 vehicles (62%), 168 vehicles (41%) and 56 vehicles (10%), respectively. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 62%.
- 7.3 Main Street pedestrianised would eliminate westbound traffic flows on the eastern section of New Street. Eastbound traffic flows would increase, resulting in an overall increase in peak hour traffic flows on New Street Upper of 102 vehicles (28%).
- 7.4 2017 peak hour traffic flows on Mission Road would increase by 521 vehicles (47%), with Main Street pedestrianised. Mission Road would continue to operate in excess of its practical capacity.
- 7.5 Elsewhere during 2017, the proposed Main Street pedestrianised scheme would increase peak hour traffic flows by 70 vehicles (6%) on Port Road, 59 vehicles (11%) on Countess Road, and 60 vehicles (10%) on St Anne's Road. The V/C ratios on these routes would be within practical capacity.

2021

- 7.6 During 2021, the provision of the proposed Main Street pedestrianised scheme would eliminate 491 vehicles on Main Street during the peak hour. The Main Street pedestrianised scheme would reduce 2021 peak hour traffic flows on Plunkett Street, College Road and High Street by 282 vehicles (62%), 198 vehicles (43%) and 36 vehicles (6%), respectively. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 65%.

- 7.7 Main Street pedestrianised would eliminate westbound traffic flows on the eastern section of New Street. Eastbound traffic flows would increase, resulting in an overall increase in peak hour traffic flows on New Street Upper of 79 vehicles (20%).
- 7.8 2021 peak hour traffic flows on Mission Road would increase by 518 vehicles (45%), with Main Street pedestrianised. Mission Road would continue to operate in excess of its practical capacity.
- 7.9 Elsewhere during 2021, the proposed Main Street pedestrianised scheme would increase peak hour traffic flows by 59 vehicles (5%) on Port Road, 80 vehicles (15%) on Countess Road, and 88 vehicles (12%) on St Anne's Road. The V/C ratios on these routes would be within practical capacity.

Main Street and Plunkett Street Pedestrianised

7.10 The predicted 2017 and 2021 modelling outputs with Main Street and Plunkett Street pedestrianised Main Street pedestrianised, detailed in Appendix B and C, are summarised in Table 10, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 19 and 20, respectively, for the proposed Main Street and Plunkett Street pedestrianised Main Street pedestrianised scheme (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 19 – Main Street and Plunkett Street Pedestrianised 2017 Traffic Flow Changes

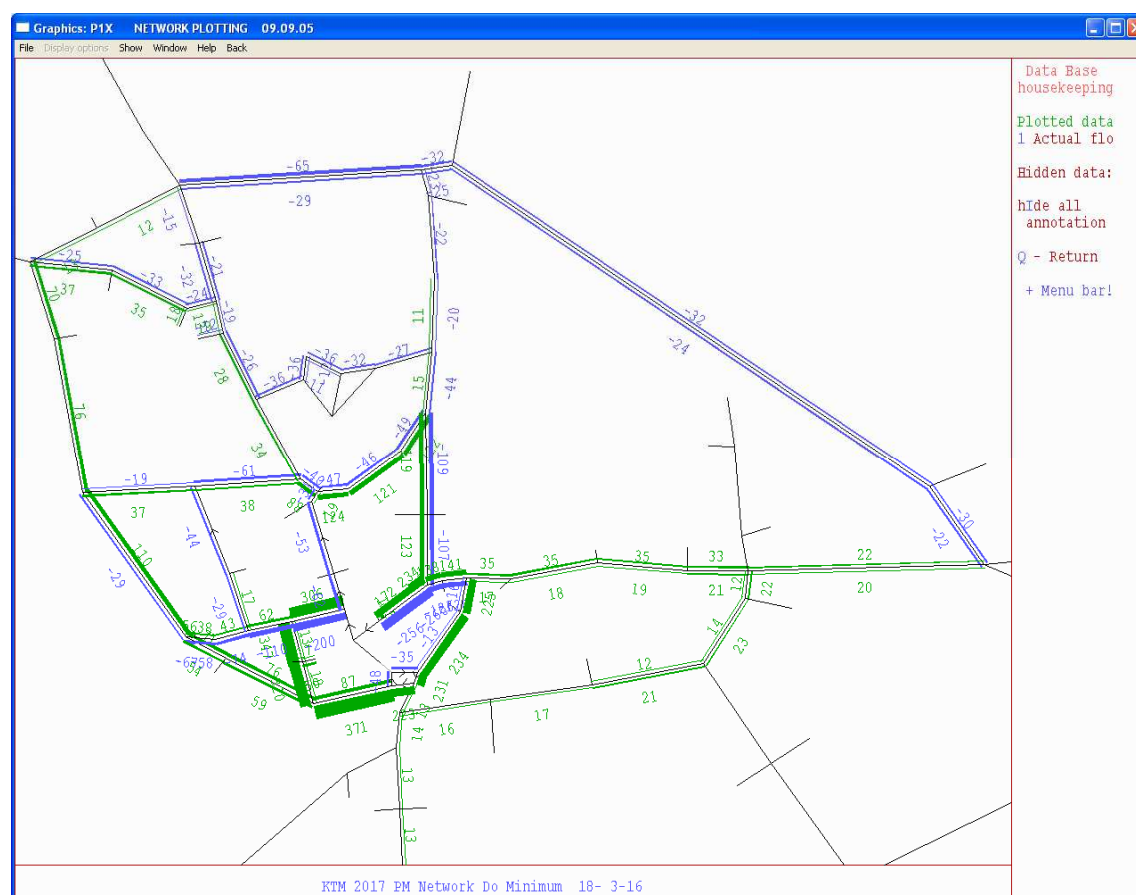


Figure 20 – Main Street and Plunkett Street Pedestrianised 2021 Traffic Flow Changes

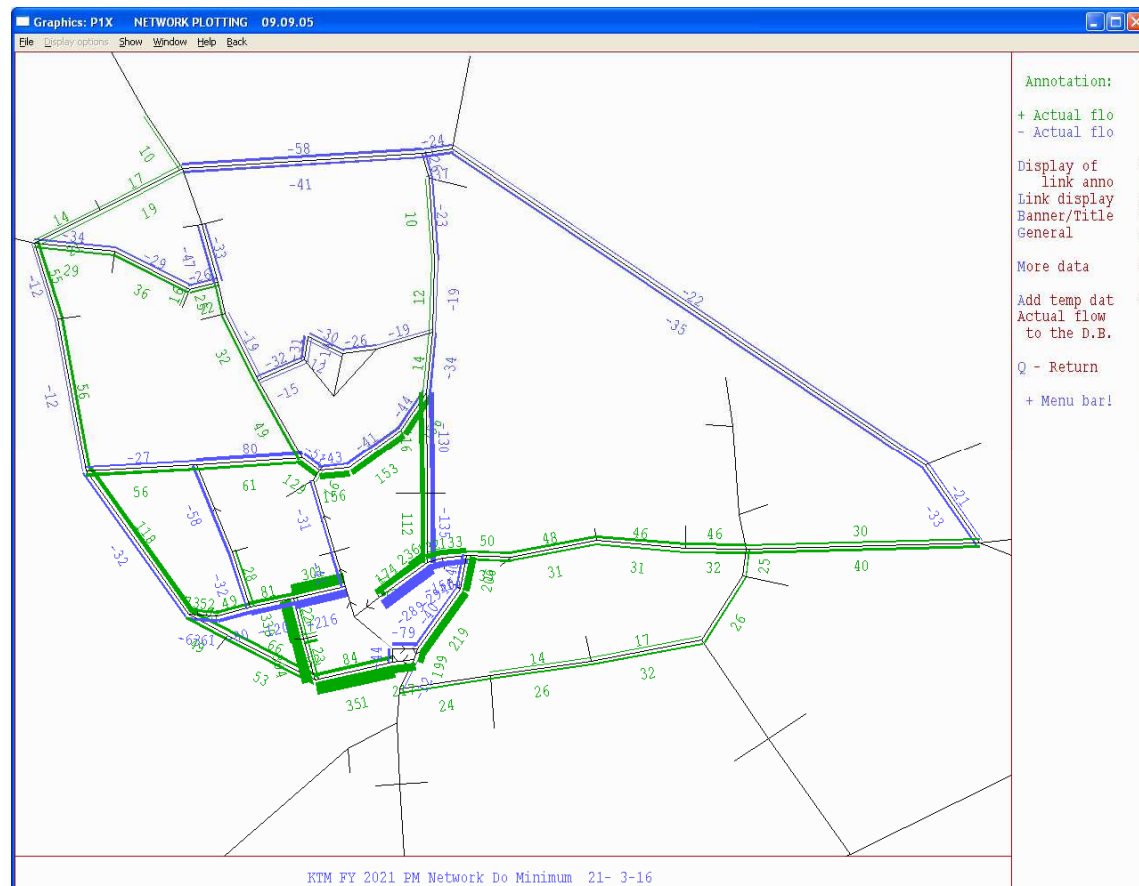


Table 10 – Summary of Main Street and Plunkett Street Pedestrianised Modelling Forecasts

2017 Peak Hour					
Road/ Street	Traffic Volumes			V/C Ratio (%)	
	Without Pedestrian Main Street + Plunkett Street	With Pedestrian Main Street + Plunkett Street	Change (+/-)	Without Pedestrian Main Street + Plunkett Street	With Pedestrian Main Street + Plunkett Street
Main Street	494	0	-491	70	N/A
Plunkett Street	421	0	-421	57	N/A
College Road	414	331	-83	44	40
High Street	577	524	-53	101	62
New Street Upper	358	465	+107	20	5
Mission Road	1,110	1,568	+458	105	102
Port Road	1,148	1,230	+82	47	44
Countess Road	519	544	+25	34	36
St Anne's Road	598	673	+75	6	5
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without Pedestrian Main Street + Plunkett Street	With Pedestrian Main Street + Plunkett Street	Change (+/-)	Without Pedestrian Main Street + Plunkett Street	With Pedestrian Main Street + Plunkett Street
Main Street	491	0	-491	69	N/A
Plunkett Street	454	0	-454	61	N/A
College	462	348	-114	48	42

Road					
High Street	573	542	-31	101	66
New Street Upper	393	479	+115	22	42
Mission Road	1,154	1,590	+436	107	105
Port Road	1,219	1,305	+86	50	50
Countess Road	524	563	+39	35	37
St Anne's Road	723	836	+113	6	6

2017

- 7.11 During 2017, the provision of the proposed Main Street and Plunkett Street pedestrianised scheme would eliminate 494 vehicles on Main Street and 421 vehicles on Plunkett Street, during the peak hour. The Main Street and Plunkett Street pedestrianised scheme would reduce 2017 peak hour traffic flows on College Road and High Street by 83 vehicles (20%) and 53 vehicles (9%), respectively. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 62%.
- 7.12 Main Street and Plunkett Street pedestrianised would eliminate westbound traffic flows on the eastern section of New Street. Eastbound traffic flows would increase, resulting in an overall increase in peak hour traffic flows on New Street Upper of 107 vehicles (30%).
- 7.13 2017 peak hour traffic flows on Mission Road would increase by 458 vehicles (41%), with Main Street and Plunkett Street pedestrianised. Mission Road would continue to operate in excess of its practical capacity.
- 7.14 Elsewhere during 2017, the proposed Main Street and Plunkett Street pedestrianised scheme would increase peak hour traffic flows by 82 vehicles (7%) on Port Road, 25 vehicles (5%) on Countess Road, and 75 vehicles (13%) on St Anne's Road. The V/C ratios on these routes would be within practical capacity.

2021

- 7.15 During 2021, the provision of the proposed Main Street and Plunkett Street pedestrianised scheme would eliminate 491 vehicles on Main Street and 454 vehicles on Plunkett Street, during the peak hour. The Main Street and Plunkett Street pedestrianised scheme would reduce 2021 peak hour traffic flows on College Road and High Street by 114 vehicles (25%) and 31 vehicles (5%), respectively. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 66%.
- 7.16 Main Street and Plunkett Street pedestrianised would eliminate westbound traffic flows on the eastern section of New Street. Eastbound traffic flows would increase, resulting in an overall increase in peak hour traffic flows on New Street Upper of 115 vehicles (29%).
- 7.17 2021 peak hour traffic flows on Mission Road would increase by 436 vehicles (38%), with Main Street and Plunkett Street pedestrianised. Mission Road would continue to operate in excess of its practical capacity.
- 7.18 Elsewhere during 2021, the proposed Main Street and Plunkett Street pedestrianised scheme would increase peak hour traffic flows by 86 vehicles (7%) on Port Road, 39 vehicles (7%) on Countess Road, and 113 vehicles (16%) on St Anne's Road. The V/C ratios on these routes would be within practical capacity.

New Street Upper One-Way Eastbound

7.19 The predicted 2017 and 2021 modelling outputs with New Street Upper one-way eastbound, detailed in Appendix B and C, are summarised hereunder in Table 11, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 21 and 22, respectively, for the New Street Upper one-way eastbound scheme (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 21 – New Street Upper One-Way Eastbound 2017 Traffic Flow Changes

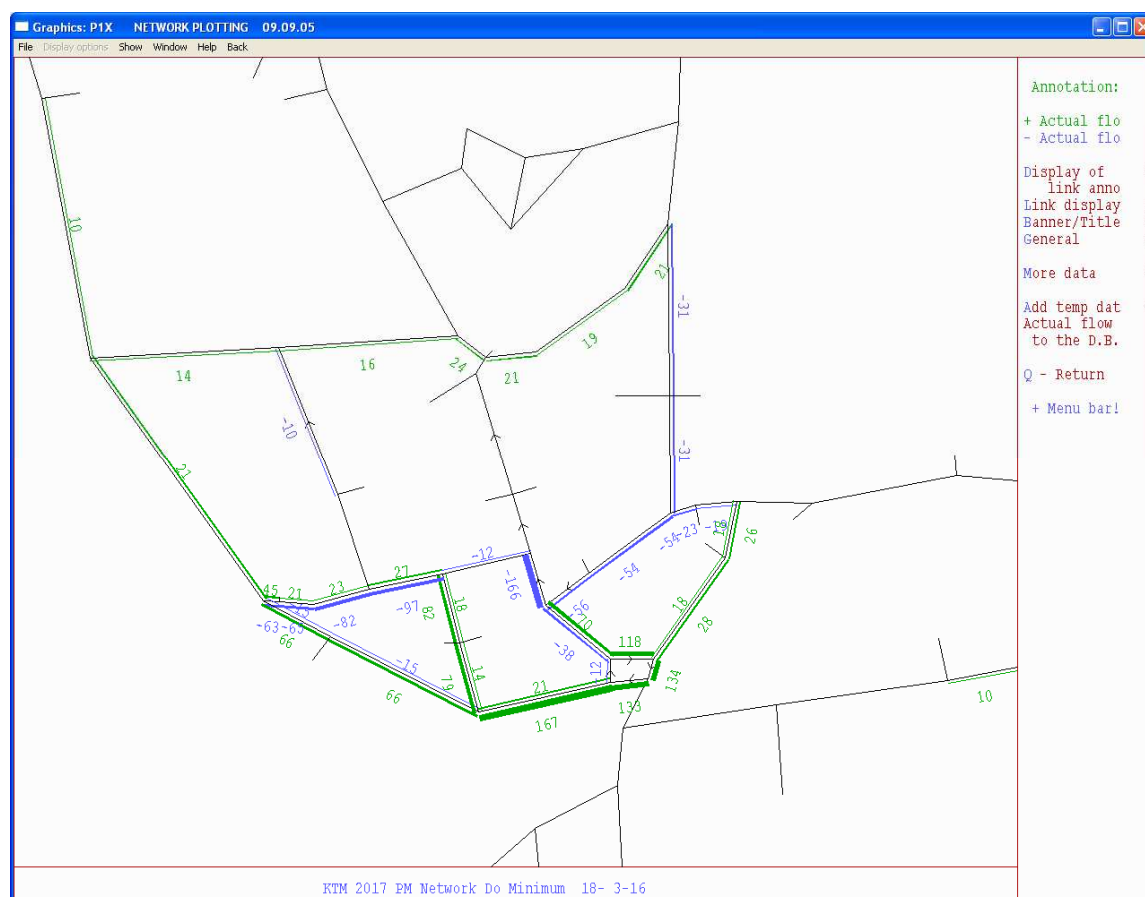


Figure 22 – New Street Upper One-Way Eastbound 2021 Traffic Flow Changes

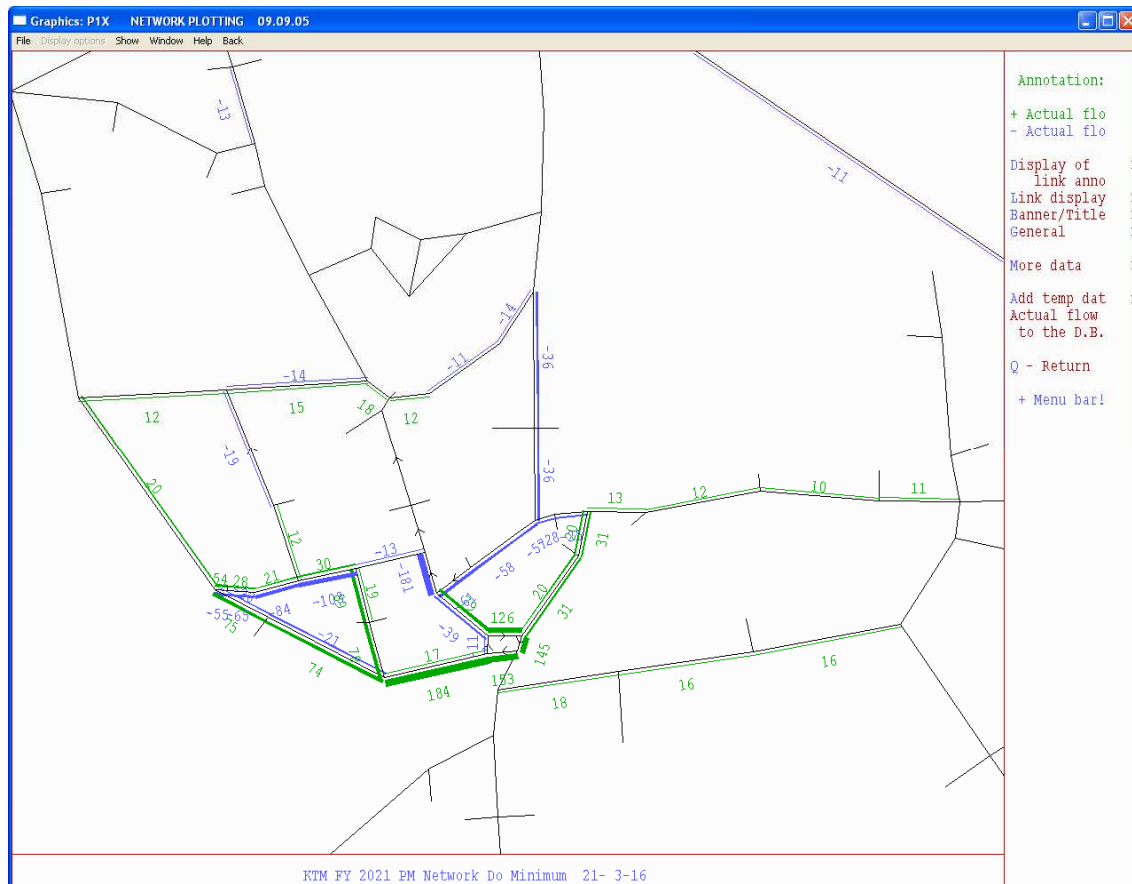


Table 11 – Summary of New Street Upper One-Way Eastbound Modelling Forecasts

2017 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without One-Way Eastbound	With One-Way Eastbound	Change (+/-)	Without One-Way Eastbound	With One-Way Eastbound
New Street Upper	358	146	-212	20	16
Plunkett Street	421	366	-55	57	48
Mission Road	1,110	1,297	+187	105	105
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without One-Way Eastbound	With One-Way Eastbound	Change (+/-)	Without One-Way Eastbound	With One-Way Eastbound
New Street Upper	393	165	-228	22	18
Plunkett Street	454	393	-61	61	52
Mission Road	1,154	1,355	+201	107	106

2017

- 7.20 During 2017, the New Street Upper one-way eastbound scheme would eliminate 200 vehicles westbound on New Street Upper, and reduce total traffic flows on New Street Upper by 212 vehicles (59%). The New Street Upper one-way eastbound scheme would reduce peak hour traffic flows on Plunkett Street by 55 vehicles (13%).
- 7.21 The New Street Upper one-way eastbound scheme would increase peak hour traffic flows by 187 vehicles (17%) on Mission Road. Mission Road would continue to operate in excess of its practical capacity.

2021

- 7.22 During 2021, the New Street Upper one-way eastbound scheme would eliminate 216 vehicles westbound on New Street Upper, and reduce total traffic flows on New Street Upper by 228 vehicles (58%). The New Street Upper one-way eastbound scheme would reduce peak hour traffic flows on Plunkett Street by 61 vehicles (13%).
- 7.23 The New Street Upper one-way eastbound scheme would increase peak hour traffic flows by 201 vehicles (17%) on Mission Road. Mission Road would continue to operate in excess of its practical capacity.

New Street Upper One-Way Westbound

- 7.24 The predicted 2017 and 2021 modelling outputs with New Street Upper one-way westbound, detailed in Appendix B and C, are summarised hereunder in Table 12, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 23 and 24, respectively, for the New Street Upper one-way westbound scheme (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 23 – New Street Upper One-Way Westbound 2017 Traffic Flow Changes

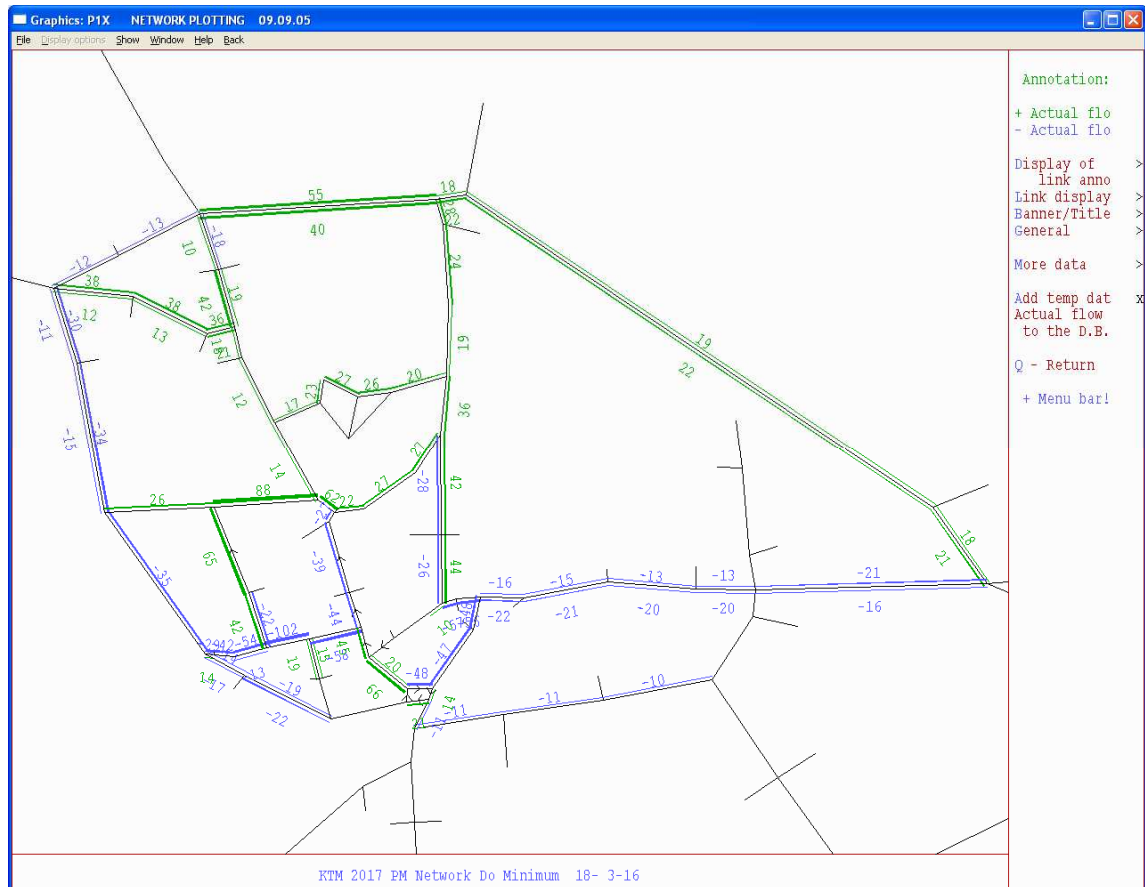


Figure 24 – New Street Upper One-Way Westbound 2021 Traffic Flow Changes

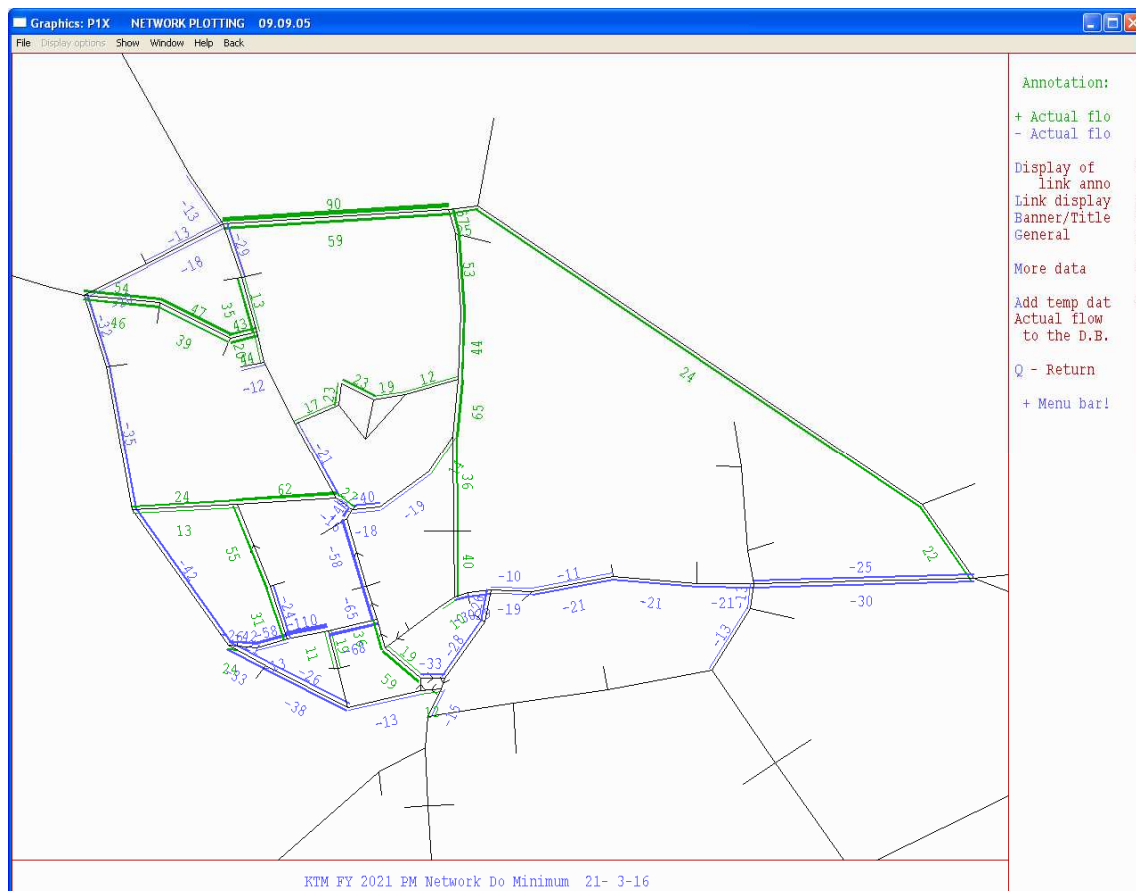


Table 12 – Summary of New Street Upper One-Way Westbound Modelling Forecasts

2017 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without One-Way Westbound	With One-Way Westbound	Change (+/-)	Without One-Way Westbound	With One-Way Westbound
New Street Upper	358	142	-216	20	24
High Street	577	538	-39	101	63
Park Road	1,633	1,598	-35	54	53
New Road	473	559	+86	70	88
Kenmare Place	246	332	+86	37	35
Port Road	1,148	1,119	-29	47	50
Killarney Bypass Road	1,213	1,255	+42	51	53
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without One-Way Westbound	With One-Way Westbound	Change (+/-)	Without One-Way Westbound	With One-Way Westbound
New Street Upper	393	148	-245	22	25
High Street	573	516	-57	101	102
Park Road	1,753	1,722	-31	56	55
New Road	530	587	+57	89	101
Kenmare Place	264	342	+78	47	44
Port Road	1,219	1,172	-47	50	52
Killarney Bypass Road	1,249	1,282	+33	56	56

2017

- 7.25 During 2017, the New Street Upper one-way westbound scheme would eliminate 158 vehicles eastbound on New Street Upper, and reduce total traffic flows on New Street Upper by 216 vehicles (60%). The New Street Upper one-way westbound scheme would reduce peak hour traffic flows on High Street by 39 vehicles (7%).
- 7.26 The New Street Upper one-way westbound scheme would increase peak hour traffic flows by 86 vehicles (18%) on New Road, and by 86 vehicles (35%) on Kenmare Place. The New Road V/C ratio would increase from 70% to 88% with the proposed scheme.
- 7.27 Elsewhere during 2017, the New Street Upper one-way westbound scheme would reduce peak hour traffic flows by 35 vehicles (2%) on Park Road and by 29 vehicles (3%) on Port Road (South); and increase traffic flows by 42 vehicles (3%) on the Killarney Bypass Road. The V/C ratios on these routes would remain within their practical capacity.

2021

- 7.28 During 2021, the New Street Upper one-way westbound scheme would eliminate 177 vehicles eastbound on New Street Upper, and reduce total traffic flows on New Street Upper by 245 vehicles (62%). The New Street Upper one-way westbound scheme would reduce peak hour traffic flows on High Street by 57 vehicles (10%).
- 7.29 The New Street Upper one-way westbound scheme would increase peak hour traffic flows by 57 vehicles (11%) on New Road, and by 78 vehicles (30%) on Kenmare Place. The New Road V/C ratio would increase from 89% to 101% with the proposed scheme.
- 7.30 Elsewhere during 2021, the New Street Upper one-way westbound scheme would reduce peak hour traffic flows by 31 vehicles (2%) on Park Road and by 47 vehicles (4%) on Port Road; and increase traffic flows by 33 vehicles (3%) on the Killarney Bypass Road. The V/C ratios on these routes would remain within their practical capacity.

Comparison with One-Way Eastbound Scheme

- 7.31 The New Street Upper one-way westbound scheme results in forecast highest increases in peak hour traffic flows on New Road and Kenmare Place. New Road would operate just within practical capacity (88%) during 2017, and in excess of practical capacity during 2021 (101%). Kenmare Place would operate with highest V/C ratios of 35% and 44%, during 2017 and 2021, respectively, with the one-way westbound scheme.
- 7.32 These increases are less than the forecast highest increases in traffic flows on Mission Road for the New Road Upper one-way eastbound scheme. Mission Road would continue to operate in excess of practical capacity with 2017 and 2021 V/C ratios of 105% and 106%, respectively, with the New Road Upper one-way eastbound scheme.

New Road One-Way Eastbound

- 7.33 The predicted 2017 and 2021 modelling outputs with New Road one-way eastbound, detailed in Appendix B and C, are summarised hereunder in Table 13, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 25 and 26, respectively, for the New Road one-way eastbound scheme (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 25 – New Road One-Way Eastbound 2017 Traffic Flow Changes

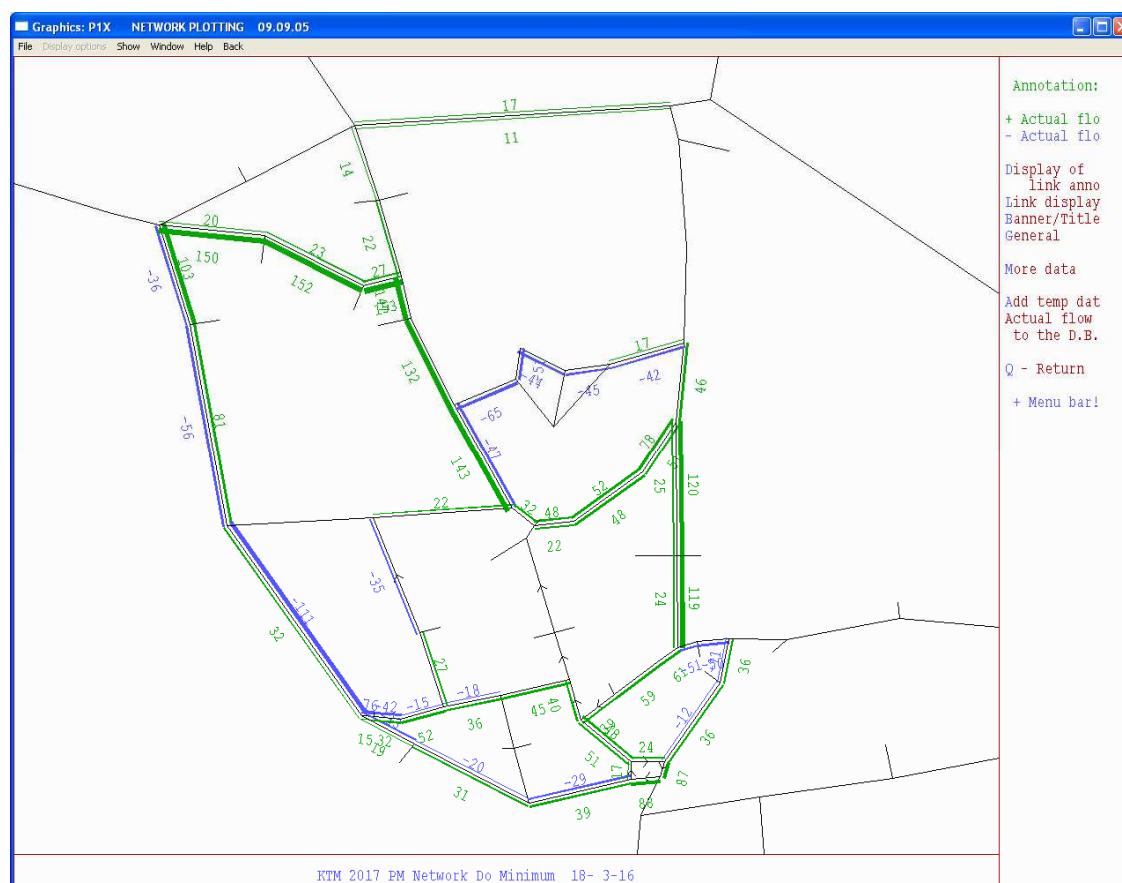


Figure 26 – New Road One-Way Eastbound 2021 Traffic Flow Changes

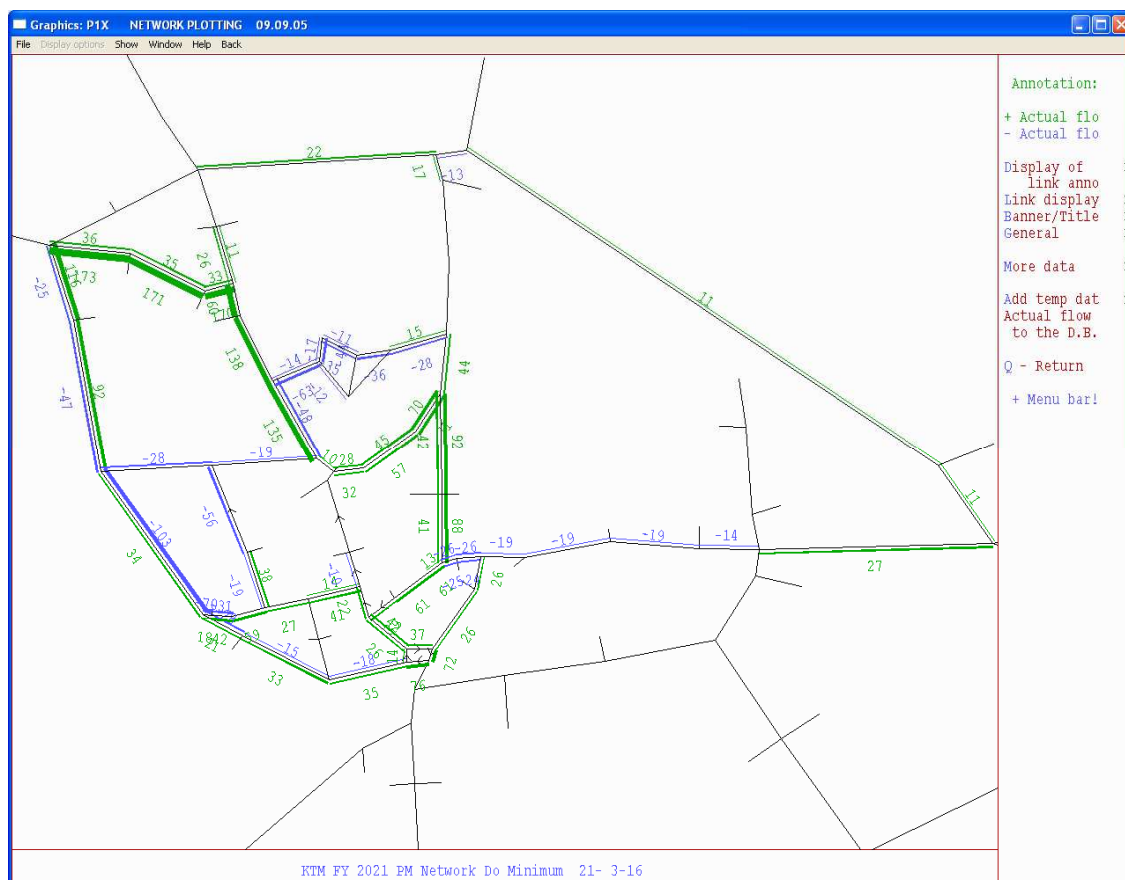


Table 13 – Summary of New Road One-Way Eastbound Modelling Forecasts

2017 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without One-Way Eastbound	With One-Way Eastbound	Change (+/-)	Without One-Way Eastbound	With One-Way Eastbound
New Road	473	271	-202	70	85
Port Road (South)	1,148	1,069	-79	47	50
New Street	358	410	+52	20	24
Plunkett Street	421	460	+39	57	64
Kenmare Place	245	344	+99	37	45
Lewis Road (South)	1,019	1,162	+143	59	70
College Road	414	479	+65	44	49
St Margaret's Road	324	494	+170	27	49
Rock Road	887	983	+96	67	82
St Anne's Road	598	698	+100	6	6
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without One-Way Eastbound	With One-Way Eastbound	Change (+/-)	Without One-Way Eastbound	With One-Way Eastbound
New Road	530	274	-256	89	98
Port Road (South)	1,219	1,150	-69	50	52
New Street	393	449	+56	22	26
Plunkett Street	454	493	+39	61	67
Kenmare Place	264	329	+65	47	55
Lewis Road (South)	1,145	1,274	+129	68	82
College Road	462	530	+68	48	53
St Margaret's Road	449	659	+210	37	62

Rock Road	993	1,081	+88	76	91
St Anne's Road	723	825	+102	6	7

2017

- 7.34 During 2017, the New Road one-way eastbound scheme would eliminate 224 vehicles westbound on New Road, and reduce total traffic flows on New Road by 202 vehicles (43%). The New Road V/C ratio would increase from 70% to 85%, with the one-way eastbound scheme.
- 7.35 The New Road one-way eastbound scheme would reduce 2017 peak hour traffic flows on Port Road, south of New Road, by 79 vehicles (7%).
- 7.36 The New Road one-way eastbound scheme would increase peak hour traffic flows by 52 vehicles (15%) on New Street, 39 vehicles (9%) on Plunkett Street and 65 vehicles (16%) on College Road. The New Road V/C ratio would increase from 70% to 88% with the proposed scheme.
- 7.37 Forecast 2017 peak hour traffic flows would increase by 143 vehicles (14%) on Lewis Road (South) and by 99 vehicles (40%) on Kenmare Place, with the New Road one-way eastbound scheme in place.
- 7.38 Elsewhere during 2017, the New Road one-way westbound scheme would increase peak hour traffic flows by 170 vehicles (52%) on St Margaret's Road, 96 vehicles (11%) on Rock Road, and 100 vehicles (17%) on St Anne's Road.
- 7.39 The V/C ratios on each of the foregoing routes would remain within their practical capacity.

2021

- 7.40 During 2021, the New Road one-way eastbound scheme would eliminate 237 vehicles westbound on New Road, and reduce total traffic flows on New Road by 256 vehicles (48%). The New Road V/C ratio would increase from 89% to 98%, with the one-way eastbound scheme.
- 7.41 The New Road one-way eastbound scheme would reduce 2021 peak hour traffic flows on Port Road, south of New Road, by 69 vehicles (6%).

- 7.42 The New Road one-way eastbound scheme would increase peak hour traffic flows by 56 vehicles (14%) on New Street, 39 vehicles (9%) on Plunkett Street and 68 vehicles (15%) on College Road. The New Road V/C ratio would increase from 89% to 98% with the proposed scheme.
- 7.43 Forecast 2021 peak hour traffic flows would increase by 129 vehicles (11%) on Lewis Road (South) and by 65 vehicles (25%) on Kenmare Place, with the New Road one-way eastbound scheme in place.
- 7.44 Elsewhere during 2021, the New Road one-way westbound scheme would increase peak hour traffic flows by 210 vehicles (47%) on St Margaret's Road, 88 vehicles (9%) on Rock Road, and 102 vehicles (14%) on St Anne's Road. The V/C ratio on Rock Road would increase from 76% to 91% (in excess of practical capacity).

N22 Killarney Bypass/ Upper Lewis Road Traffic Management

- 7.45 The prohibition of right turning movements at the intersection of Lewis Road with the N22 Killarney Bypass was analysed.
- 7.46 The predicted 2017 and 2021 modelling outputs with the proposed traffic management in place, detailed in Appendix B and C, are summarised in Table 14, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 27 and 28, respectively, for with the proposed banned turning movements (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

**Figure 27 – N22 Killarney Bypass/ Upper Lewis Road Right Turns Banned
2017 Traffic Flow Changes**

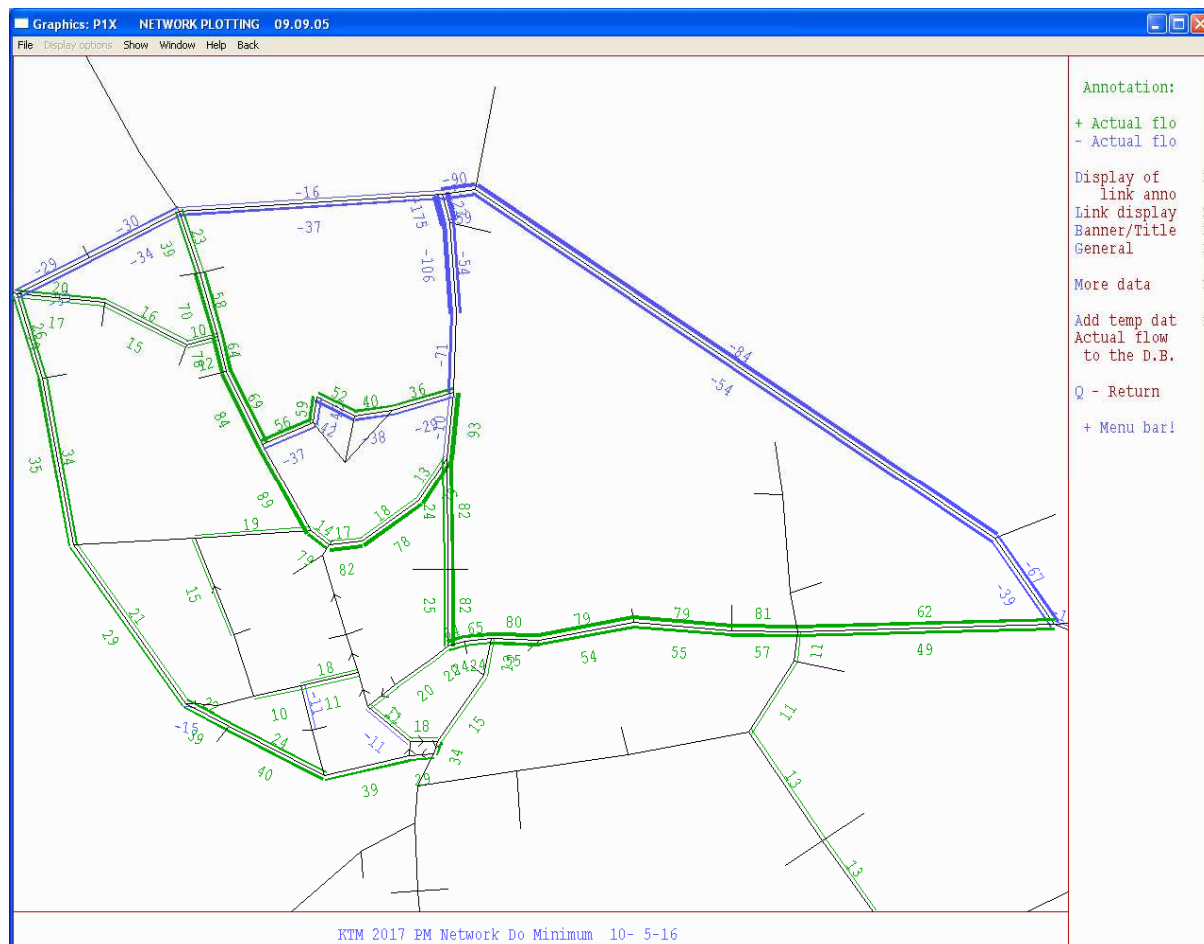
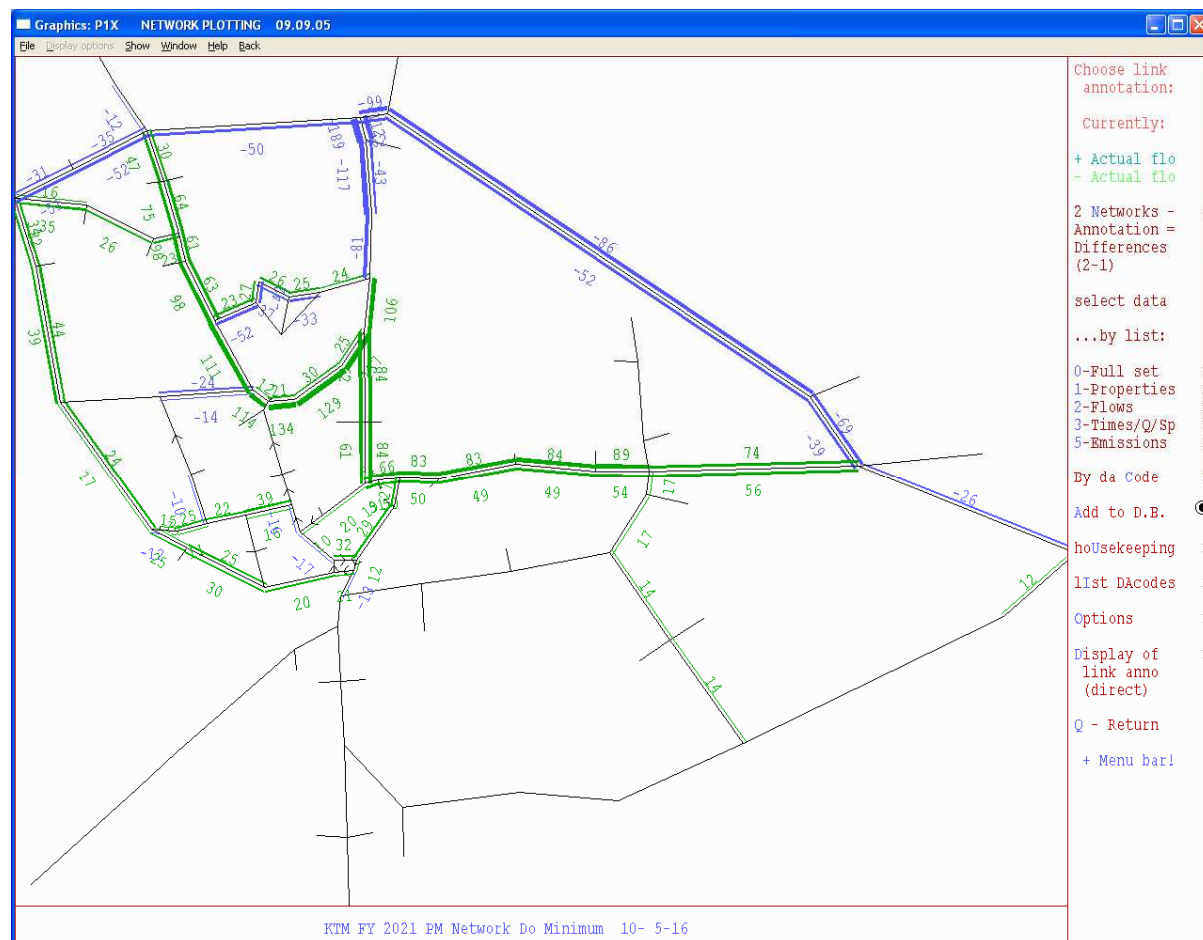


Figure 28 – N22 Killarney Bypass/ Upper Lewis Road Right Turns Banned 2021 Traffic Flow Changes



**Table 14 – Summary of N22 Bypass/ Upper Lewis Road Banned Right Turning
in Place Modelling Forecasts**

2017 Peak Hour					
Road/ Street	Traffic Volumes			V/C Ratio (%)	
	Without Banned Turns	With Banned Turns	Change (+/-)	Without Banned Turns	With Banned Turns
N22 Killarney Bypass	1,214	1,076	-138	51	44
Upper Lewis Rd, South of Bypass	371	212	-159	27	16
Park Road	1,633	1,766	+133	54	59
St Anne's Road	598	694	+96	6	6
Rock Road, south of Bypass	1,284	1,346	+62	90	92
Mission Road	1,109	1,156	+47	105	105
Port Road	1,148	1,199	+51	47	49
New Street Upper	358	388	+30	20	21
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without Banned Turns	With Banned Turns	Change (+/-)	Without Banned Turns	With Banned Turns
N22 Killarney Bypass	1,249	1,111	-138	56	48
Upper Lewis Rd, South of Bypass	411	251	-160	30	17

Park Road	1,753	1,885	+132	56	61
St Anne's Road	723	883	+160	6	6
Rock Road, south of Bypass	1,295	1,372	+77	96	99
Mission Road	1,154	1,182	+28	107	108
Port Road	1,218	1,259	+41	50	50
New Street Upper	393	448	+55	22	24

2017

- 7.47 During 2017, the provision of the proposed N22/ Upper Lewis Road traffic management measures would increase peak hour traffic flows on Park Road by 133 vehicles. Traffic volumes on St. Anne's Road would increase by 96 vehicles. Volumes on Rock Road and Port Road would increase by 62 vehicles and 51 vehicles respectively. The V/C ratio of Rock Road would increase from 90% to 92%.
- 7.48 During 2017, the proposed banned turns would increase peak hour traffic flows by 47 vehicles on Mission Road. Mission Road would continue to operate with a V/C of 105%. Volumes on New Street Upper would increase by 30 vehicles.
- 7.49 Traffic volumes on Lewis Road, north of College Street would increase by 107 vehicles.
- 7.50 The provision of the proposed banned turns would eliminate 159 vehicles on Upper Lewis Road, south of the bypass and would reduce volumes on the N22 Killarney Bypass by 138 vehicles, during the peak hour.

2021

- 7.51 During 2021, the provision of the proposed N22/ Upper Lewis Road traffic management measures would increase peak hour traffic flows on Park Road by 132 vehicles. Traffic volumes on St. Anne's Road would increase by 160 vehicles. Volumes on Rock Road and Port Road would increase by 77 vehicles and 41 vehicles respectively. The V/C ratio of Rock Road would increase from 96% to 99%.

- 7.52 During 2021, the proposed banned turns would increase peak hour traffic flows by 28 vehicles on Mission Road. Mission Road would operate with a V/C of 108%, with the measures in place. Volumes on New Street Upper would increase by 55 vehicles.
- 7.53 Traffic volumes on Lewis Road, north of College Street would increase by 145 vehicles.
- 7.54 The provision of the proposed banned turns would eliminate 160 vehicles on Upper Lewis Road, south of the bypass and would reduce volumes on the N22 Killarney Bypass by 138 vehicles, during the year 2021 peak hour.

8.0 INNER RELIEF ROAD PLUS TRAFFIC MANAGEMENT SCHEMES

Inner Relief Road + Main Street Pedestrianised

- 8.1 The predicted 2017 and 2021 modelling outputs for the proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun, with Main Street pedestrianised, detailed in Appendix B and C, are summarised in Table 15, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 29 and 30, respectively, for the proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun with the proposed Main Street pedestrianised scheme (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

Figure 29 – Inner Relief Road + Main Street Pedestrianised 2017 Traffic Flow Changes

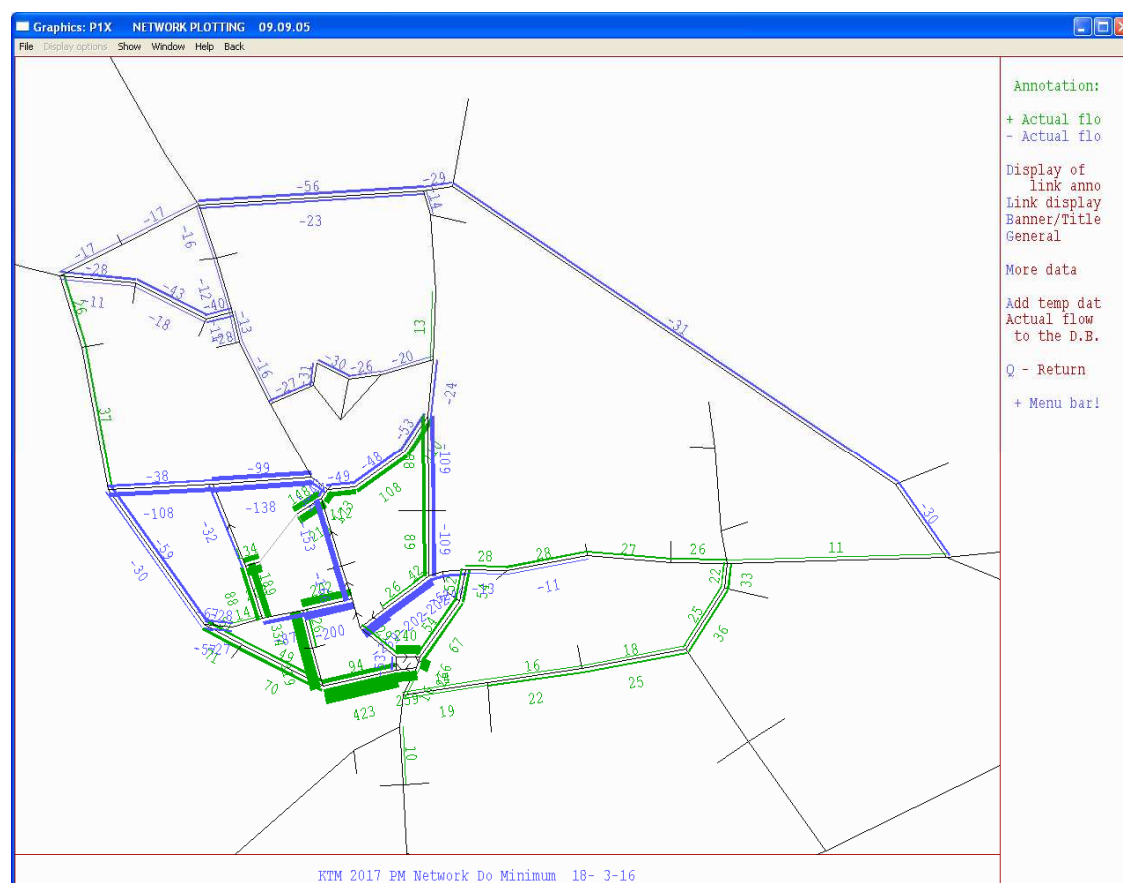


Figure 30 – Inner Relief Road + Main Street Pedestrianised 2021 Traffic Flow Changes

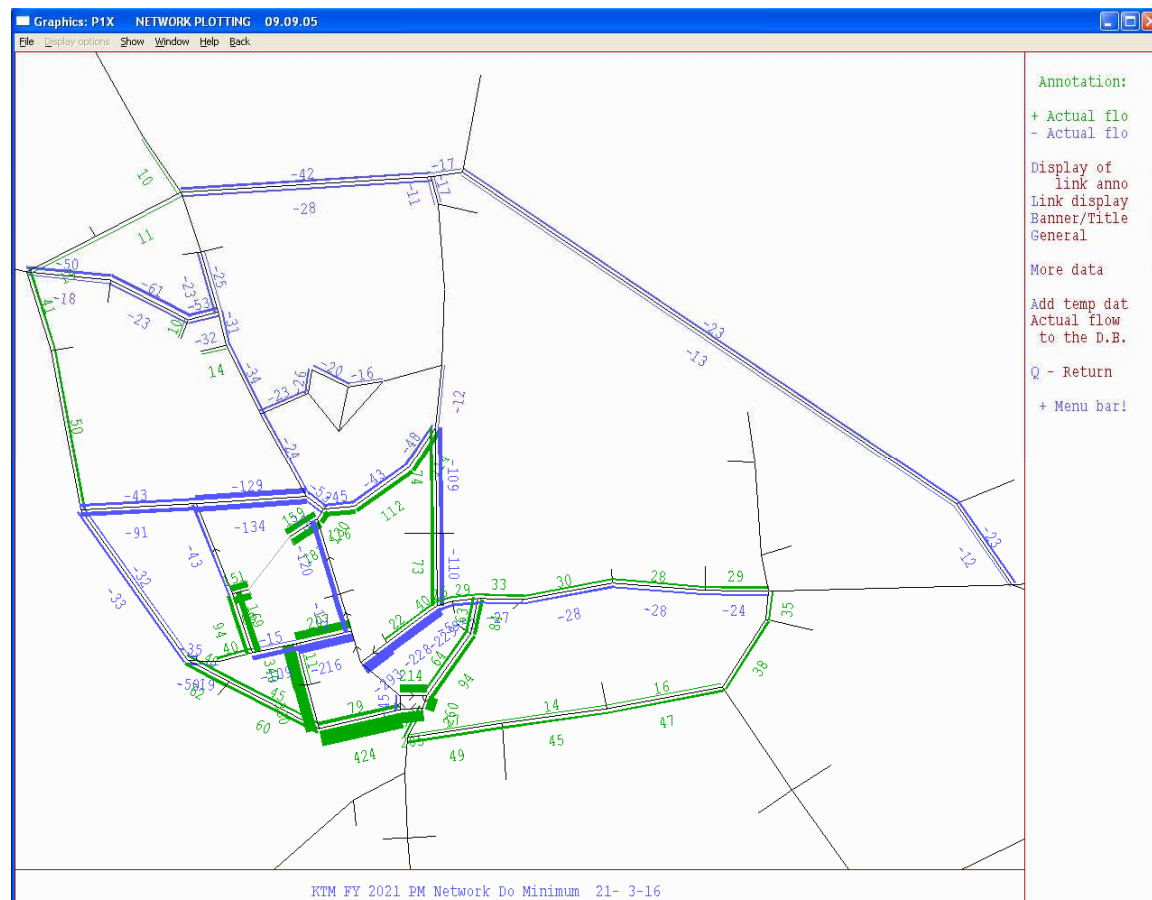


Table 15 – Summary of Inner Relief Road + Main Street Pedestrianised Modelling Forecasts

2017 Peak Hour					
Road/ Street	Traffic Volumes			V/C Ratio (%)	
	Without IRR + Pedestrian Main Street	With IRR + Pedestrian Main Street	Change (+/-)	Without IRR + Pedestrian Main Street	With IRR + Pedestrian Main Street
Main Street	494	0	-494	70	N/A
Plunkett Street	421	152	-269	57	2
College Road	414	238	-176	44	24
High Street	577	423	-154	101	65
New Road	473	236	-237	70	55
Port Road (South)	1,148	1,059	-89	47	44
St Margaret's Road	324	285	-39	27	27
Mission Road	1,110	1,627	+517	105	102
New Street Upper	358	423	+65	20	65
Countess Road	519	556	+37	34	36
St Anne's Road	598	658	+60	6	5
Bohreen Na Goun	327	603	+276	42	83
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without IRR + Pedestrian	With IRR + Pedestrian Main Street	Change (+/-)	Without IRR + Pedestrian Main Street	With IRR + Pedestrian Main Street

	Main Street				
Main Street	491	0	-491	69	N/A
Plunkett Street	454	161	-293	61	2
College Road	462	257	-205	48	26
High Street	573	453	-120	101	66
New Road	530	267	-263	89	68
Port Road (South)	1,219	1,154	-65	50	48
St Margaret's Road	449	381	-68	37	36
Mission Road	1,154	1,657	+503	107	103
New Street Upper	393	453	+60	22	66
Countess Road	524	583	+59	35	38
St Anne's Road	723	791	+68	6	6
Bohreen Na Goun	342	605	+263	43	80

2017

- 8.2 During 2017, the provision of the proposed Inner Relief Road and Main Street pedestrianised would eliminate 494 vehicles on Main Street during the peak hour.
- 8.3 The Inner Relief Road with Main Street pedestrianised would reduce 2017 peak hour traffic flows on Plunkett Street, College Road and High Street by 269 vehicles (64%), 176 vehicles (43%) and 154 vehicles (27%), respectively. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 65%.
- 8.4 During 2017, the Inner Relief Road and Main Street pedestrianised would reduce peak hour traffic flows on New Road, Port Road (South) and St Margaret's Road by 237 vehicles (50%), 89 vehicles (8%) and 39 vehicles (12%), respectively.

- 8.5 Main Street pedestrianised would eliminate westbound traffic flows on the eastern section of New Street. Eastbound traffic flows would increase, resulting in an overall increase in peak hour traffic flows on New Street Upper of 65 vehicles (18%), with the Inner Relief Road also provided.
- 8.6 Forecast 2017 peak hour traffic flows on Mission Road would increase by 517 vehicles (47%), with Main Street pedestrianised and the provision of the Inner Relief Road. Mission Road would continue to operate in excess of its practical capacity.
- 8.7 Elsewhere during 2017, the proposed Main Street pedestrianised scheme and provision of the Inner Relief Road would increase peak hour traffic flows by 276 vehicles (84%) on Bohreen Na Goun, 37 vehicles (7%) on Countess Road, and 60 vehicles (10%) on St Anne's Road. The V/C ratios on these routes would be within practical capacity.

2021

- 8.8 During 2021, the provision of the proposed Inner Relief Road and Main Street pedestrianised would eliminate 491 vehicles on Main Street during the peak hour.
- 8.9 The Inner Relief Road with Main Street pedestrianised would reduce 2021 peak hour traffic flows on Plunkett Street, College Road and High Street by 293 vehicles (65%), 205 vehicles (44%) and 120 vehicles (21%), respectively. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 66%.
- 8.10 During 2021, the Inner Relief Road and Main Street pedestrianised would reduce peak hour traffic flows on New Road, Port Road (South) and St Margaret's Road by 263 vehicles (50%), 65 vehicles (5%) and 68 vehicles (15%), respectively.
- 8.11 Main Street pedestrianised would eliminate westbound traffic flows on the eastern section of New Street. Eastbound traffic flows would increase, resulting in an overall increase in peak hour traffic flows on New Street Upper of 60 vehicles (15%), with the Inner Relief Road also provided.

- 8.12 Forecast 2021 peak hour traffic flows on Mission Road would increase by 503 vehicles (44%), with Main Street pedestrianised and the provision of the Inner Relief Road. Mission Road would continue to operate in excess of its practical capacity.
- 8.13 Elsewhere during 2021, the proposed Main Street pedestrianised scheme and provision of the Inner Relief Road would increase peak hour traffic flows by 263 vehicles (77%) on Bohreen Na Goun, 59 vehicles (11%) on Countess Road, and 68 vehicles (9%) on St Anne's Road. The V/C ratios on these routes would be within practical capacity.

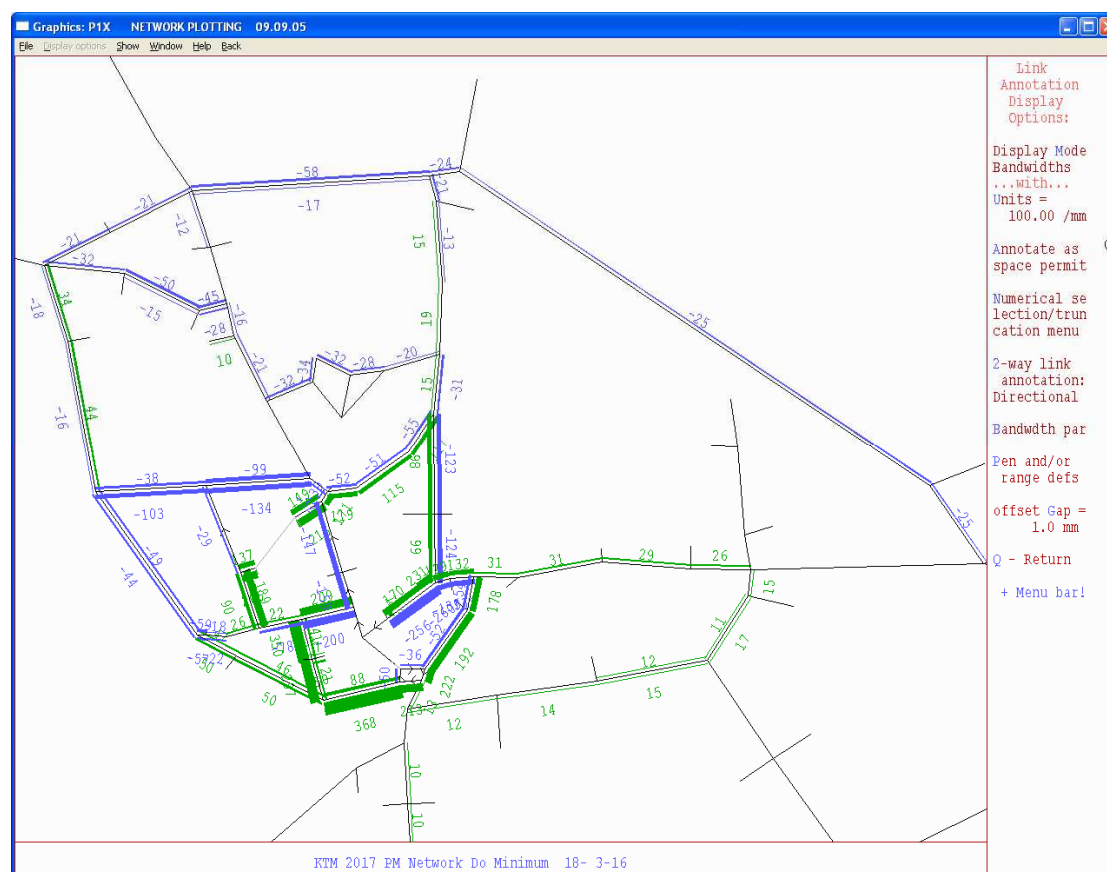
Comparison with Main Street Pedestrianised Only

- 8.14 Compared to the Main Street pedestrianised scheme, the provision of the Inner Relief Road and Main Street pedestrianised would result in similar forecast traffic flows on Mission Road. The provision of the Inner Relief Road and Main Street pedestrianised would result in higher reductions in forecast traffic flows on High Street, New Road and St Margaret's Road compared to Main Street pedestrianised without the Inner Relief Road.
- 8.15 The provision of the Inner Relief Road and Main Street pedestrianised would reduce forecast traffic flows on Port Road, south of New Road. An increase is forecast on Port Road with Main Street pedestrianised without the Inner Relief Road.

Inner Relief Road + Main Street and Plunkett Street Pedestrianised

8.16 The predicted 2017 and 2021 modelling outputs for the proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun, with Main Street and Plunkett Street pedestrianised, detailed in Appendix B and C, are summarised in Table 16, for the Study Area road links mainly impacted. The predicted changes in 2017 and 2021 forecast year peak hour traffic flows are also shown in graphical form in Figures 31 and 32, respectively, for the proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun with the proposed Main Street and Plunkett Street pedestrianised scheme (blue indicates a decrease in traffic flows, green indicates an increase), compared to the do-minimum scenario.

**Figure 31 – Inner Relief Road + Main Street and Plunkett Street Pedestrianised
2017 Traffic Flow Changes**



**Figure 32 – Inner Relief Road + Main Street and Plunkett Street Pedestrianised
2021 Traffic Flow Changes**

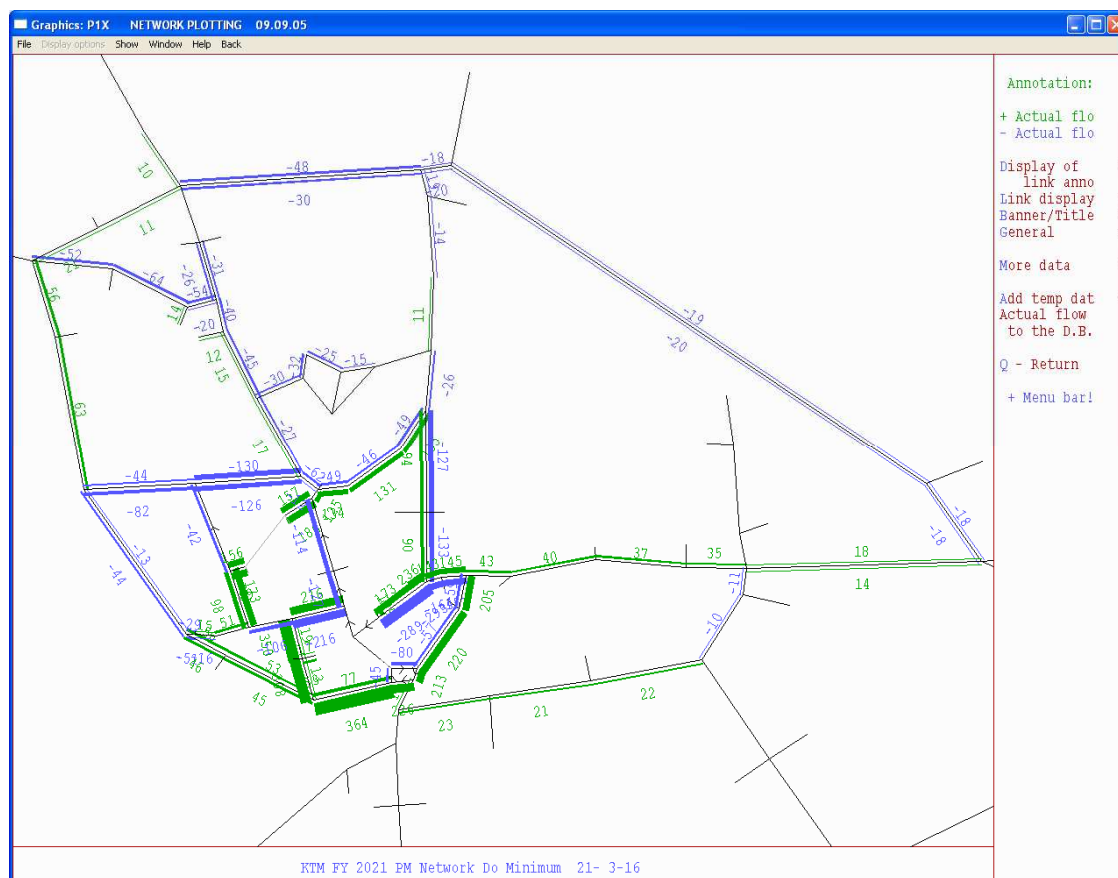


Table 16 – Summary of Inner Relief Road + Main Street and Plunkett Street Pedestrianised Modelling Forecasts

2017 Peak Hour					
Road/ Street	Traffic Volumes			V/C Ratio (%)	
	Without IRR + Pedestrian Main Street + Plunkett Street	With IRR + Pedestrian Main Street + Plunkett Street	Change (+/-)	Without IRR + Pedestrian Main Street + Plunkett Street	With IRR + Pedestrian Main Street + Plunkett Street
Main Street	494	0	-494	70	N/A
Plunkett Street	421	0	-421	57	N/A
College Road	414	328	-86	44	39
High Street	577	429	-148	101	66
New Road	473	240	-233	70	56
Port Road (South)	1,148	1,057	-91	47	43
St Margaret's Road	324	287	-37	27	28
Mission Road	1,110	1,565	+455	105	102
New Street Upper	358	429	+71	20	66
Countess Road	519	543	+24	34	35
St Anne's Road	598	662	+64	6	5
Bohreen Na Goun	327	606	+279	42	84
2021 Peak Hour					
Road/Street	Traffic Volumes			V/C Ratio (%)	
	Without	With IRR +	Change	Without IRR +	With IRR +

	IRR + Pedestrian Main Street + Plunkett Street	Pedestrian Main Street + Plunkett Street	(+/-)	Pedestrian Main Street + Plunkett Street	Pedestrian Main Street + Plunkett Street
Main Street	491	0	-491	69	N/A
Plunkett Street	454	0	-454	61	N/A
College Road	462	347	-115	48	42
High Street	573	460	-113	101	67
New Road	530	274	-256	89	69
Port Road (South)	1,219	1,161	-58	50	47
St Margaret's Road	449	394	-55	37	39
Mission Road	1,154	1,595	+441	107	103
New Street Upper	393	460	+67	22	67
Countess Road	524	546	+22	35	36
St Anne's Road	723	808	+85	6	6
Bohreen Na Goun	342	613	+271	43	81

2017

- 8.17 During 2017, the provision of the proposed Inner Relief Road with the Main Street and Plunkett Street pedestrianised scheme would eliminate 494 vehicles on Main Street and 421 vehicles on Plunkett Street, during the peak hour.

- 8.18 The Inner Relief Road with Main Street and Plunkett Street pedestrianised would reduce forecast 2017 peak hour traffic flows on College Road and High Street by 86 vehicles (21%) and 148 vehicles (26%), respectively. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 66%.
- 8.19 During 2017, the Inner Relief Road with Main Street and Plunkett Street pedestrianised would reduce peak hour traffic flows on New Road, Port Road (South) and St Margaret's Road by 233 vehicles (49%), 91 vehicles (8%) and 37 vehicles (11%), respectively.
- 8.20 Main Street and Plunkett Street pedestrianised would eliminate westbound traffic flows on the eastern section of New Street. Eastbound traffic flows would increase, resulting in an overall increase in peak hour traffic flows on New Street Upper of 71 vehicles (20%).
- 8.21 2017 peak hour traffic flows on Mission Road would increase by 455 vehicles (41%), with Main Street and Plunkett Street pedestrianised, and the Inner Relief Road in place. Mission Road would continue to operate in excess of its practical capacity.
- 8.22 Elsewhere during 2017, the proposed Main Street and Plunkett Street pedestrianised scheme and provision of the Inner Relief Road would increase peak hour traffic flows by 279 vehicles (85%) on Bohreen Na Goun, 71 vehicles (20%) on New Street Upper, 24 vehicles (5%) on Countess Road, and 64 vehicles (11%) on St Anne's Road. The V/C ratios on these routes would be within practical capacity.

2021

- 8.23 During 2021, the provision of the proposed Inner Relief Road with the Main Street and Plunkett Street pedestrianised scheme would eliminate 491 vehicles on Main Street and 454 vehicles on Plunkett Street, during the peak hour.
- 8.24 The Inner Relief Road with Main Street and Plunkett Street pedestrianised would reduce forecast 2021 peak hour traffic flows on College Road and High Street by 115 vehicles (25%) and 113 vehicles (20%), respectively. The V/C ratio on High Street would reduce from at capacity to within practical capacity, at 67%.

- 8.25 During 2021, the Inner Relief Road with Main Street and Plunkett Street pedestrianised would reduce peak hour traffic flows on New Road, Port Road (South) and St Margaret's Road by 256 vehicles (48%), 58 vehicles (5%) and 55 vehicles (12%), respectively.
- 8.26 Main Street and Plunkett Street pedestrianised would eliminate westbound traffic flows on the eastern section of New Street. Eastbound traffic flows would increase, resulting in an overall increase in peak hour traffic flows on New Street Upper of 67 vehicles (17%).
- 8.27 2021 peak hour traffic flows on Mission Road would increase by 441 vehicles (38%), with Main Street and Plunkett Street pedestrianised, and the Inner Relief Road in place. Mission Road would continue to operate in excess of its practical capacity.
- 8.28 Elsewhere during 2021, the proposed Main Street and Plunkett Street pedestrianised scheme and provision of the Inner Relief Road would increase peak hour traffic flows by 271 vehicles (79%) on Bohreen Na Goun, 67 vehicles (17%) on New Street Upper, 22 vehicles (4%) on Countess Road, and 85 vehicles (12%) on St Anne's Road. The V/C ratios on these routes would be within practical capacity.

Comparison with Main Street and Plunkett Street Pedestrianised Only

- 8.29 Compared to the Main Street and Plunkett Street pedestrianised scheme, the provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would result in similar forecast traffic flows on Mission Road. The provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would result in higher reductions in forecast traffic flows on High Street, New Road and St Margaret's Road compared to Main Street and Plunkett Street pedestrianised without the Inner Relief Road.
- 8.30 The provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would reduce forecast traffic flows on Port Road, south of New Road. An increase is forecast on Port Road (South) with Main Street and Plunkett Street pedestrianised without the Inner Relief Road.

9.0 SUMMARY OF CONCLUSIONS

2015 Base Year

- 9.1 The 2015 base year model indicates that Mission Road, Park Road at the Park Road Roundabout, Muckcross Road south of Woodlawn Road, High Street (north) and Ross Road at Muckcross Road are operating at capacity, in excess of practical capacity for the modelled peak hour traffic flows.

2017 and 2021 Do Minimum

- 9.2 The network locations operating at capacity in 2015, identified in Section 9.1 above, would continue to operate at capacity, in excess of practical capacity in 2017 and 2021 for the forecast do minimum peak hours. No additional network locations would exceed practical capacity for the forecast 2017 and 2021 peak hour traffic flows.

New Road Links

Inner Relief Road

- 9.3 The proposed Inner Relief Road (IRR) linking High Street and New Street via Boreen Na Goun would significantly reduce peak hour traffic flows on High Street and New Road. The Inner Relief Road/Bohreen Na Goun route would facilitate approximately 700 vehicles peak hour, at capacity.

Gaelscoil Road

- 9.4 The proposed Gaelscoil Road (Deerpark/N22 Killarney Bypass Link) would reduce peak hour traffic flows locally on Park Road and the Killarney Bypass Road, in the vicinity of Park Road Roundabout. This would reduce the critical V/C ratios at the Park Road Roundabout. Gaelscoil Road would facilitate approximately 400 vehicles peak hour and would also reduce traffic flows on Arbutus Drive.

Muckcross Road/Ross Road Link Road

- 9.5 The proposed Muckcross Road/Ross Road Link Road would facilitate approximately 300 vehicles peak hour. The proposed Link Road would not significantly reduce forecast traffic flows on Muckcross Road. The Link Road would reduce forecast traffic flows by almost approximately 200 vehicles peak hour on Ross Road, north of the proposed Link Road.

- 9.6 The proximity of the Muckcross Road/Ross Road traffic signals junction to nearby town centre junctions also informs the V/C ratios of Muckcross Road and Ross Road within the modelled forecasts. An OSCADY software modelling analysis of the existing Muckcross Road/Ross Road traffic signals junction is likely to confirm the operational enhancement of the traffic signals junction locally arising from the provision of the Muckcross Road/Ross Road Link Road.

Southern Outer Relief Road

- 9.7 The proposed Southern Outer Relief Road, linking Cork Road (N22) and Muckcross Road (N71), would facilitate less than 300 vehicles peak hour forecast traffic flows. The outer Relief Road would reduce peak hour traffic flows by up to 6% locally on Park Road, at the Park Road Roundabout. This section of Park Road would continue to operate at capacity both with and without the proposed Outer Relief Road.

Glebe Link Road

- 9.8 The proposed Glebe Link Road would result in increased traffic flows along Park Road, College Street, New Street, and Port Road. Reduced volumes would be on Lewis Road, St. Anne's Road, New Road, and the N22 Killarney Bypass.
- 9.9 These increases in the town centre core area are not considered desirable, particularly in the context of the objective of providing a safe core area with improved pedestrian access and safety.

Traffic Management Schemes

Main Street Pedestrianised

- 9.10 Main Street pedestrianised would eliminate almost 500 vehicles peak hour traffic flows from Main Street, and eliminate westbound traffic flows on New Street Upper. Main Street pedestrianised would also significantly reduce traffic flows on Plunkett Street and College Road.

- 9.11 Main Street pedestrianised would significantly increase forecast peak hour traffic flows on Mission Road (by over 500 vehicles), the New Street Car Park Road and eastbound on New Street. Mission Road would operate with similar V/C ratios than without Main Street pedestrianised. It is envisaged that the vast majority of such traffic is town centre parking-based terminating/stopping traffic.

Main Street and Plunkett Street Pedestrianised

- 9.12 Main Street and Plunkett Street pedestrianised would eliminate almost 500 vehicles peak hour traffic flows on Main Street and up to approximately 450 vehicles on Plunkett Street, and eliminate westbound traffic flows on New Street Upper. Main Street and Plunkett Street pedestrianised would also reduce traffic flows on College Road and High Street.

- 9.13 Main Street and Plunkett Street pedestrianised would significantly increase forecast peak hour traffic flows on Mission Road (by approximately 450 vehicles), Beech Road and eastbound on New Street. Mission Road would operate with similar V/C ratios than without the pedestrianised scheme. It is envisaged that the vast majority of such traffic is town centre parking-based terminating/stopping traffic.

New Street Upper One-Way Eastbound

- 9.14 New Street Upper one-way eastbound would eliminate approximately 200 westbound peak hour vehicles on New Street and reduce traffic flows on Plunkett Street. New Street one-way eastbound would increase forecast peak hour traffic flows on Mission Road by approximately 200 vehicles. Mission Road would operate with similar V/C ratios than without the one-way scheme.

New Street One-Way Westbound

- 9.15 New Street one-way westbound would eliminate over 150 eastbound peak hour vehicles on New Street and reduce traffic flows on High Street and Park Road. New Street one-way westbound would increase forecast peak hour traffic flows on New Road and Kenmare Place. New Road would operate in excess of practical capacity in 2021 with the scheme in place.

New Road One-Way Eastbound

- 9.16 New Road one-way eastbound would eliminate over 200 westbound peak hour vehicles on New Road, and reduce traffic flows on Port Road (South). New Road would operate with higher V/C ratios and in excess of its practical capacity in 2021. New Road one-way eastbound would increase traffic flows on its surrounding street and road network, including to in excess of practical capacity on Rock Road.

N22 Killarney Bypass/ Upper Lewis Road Banned Right Turns

- 9.17 The proposed banned right turns at the N22/ Upper Lewis Road would result in increased traffic flow along Park Road, Lewis Road, St. Anne's Road, Rock Road, Mission Road and Port Road. Reduced volumes would be observed on Upper Lewis Road and the N22 Killarney Bypass.
- 9.18 While there may be a potential safety benefit from reducing traffic turning movements from a priority controlled junction within the 100 kph speed limit, the diversion of traffic would be from the N22 Killarney Bypass to Park Road, and other town centre roads that are currently experiencing congestion.

Inner Relief Road + Traffic Management Schemes

Inner Relief Road + Main Street Pedestrianised

- 9.19 Compared to the Main Street pedestrianised scheme, the provision of the Inner Relief Road and Main Street pedestrianised would result in similar increased forecast traffic flows on Mission Road, and similar reduced traffic flows on Plunkett Street and College Road. The provision of the Inner Relief Road and Main Street pedestrianised would result in higher reductions in forecast traffic flows on High Street, New Road and St Margaret's Road compared to Main Street pedestrianised without the Inner Relief Road.
- 9.20 The provision of the Inner Relief Road and Main Street pedestrianised would reduce forecast traffic flows on Port Road, south of New Road. An increase is forecast on Port Road with Main Street pedestrianised without the Inner Relief Road.

Inner Relief Road + Main Street and Plunkett Street Pedestrianised

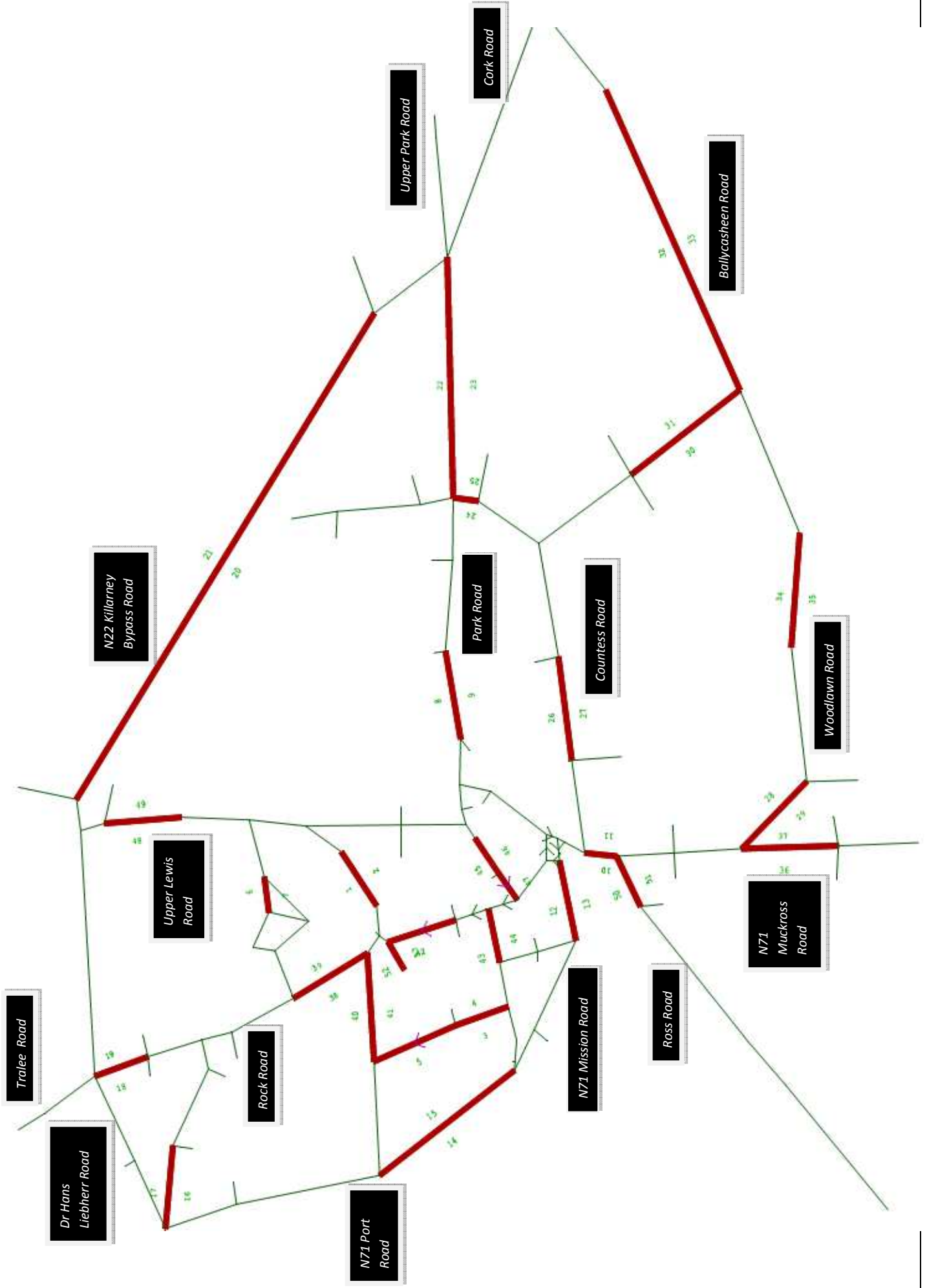
- 9.21 Compared to the Main Street and Plunkett Street pedestrianised scheme, the provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would result in similar increased forecast traffic flows on Mission Road, and similar reduced traffic flows on Plunkett Street and College Road. The provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would result in higher reductions in forecast traffic flows on High Street, New Road and St Margaret's Road compared to Main Street and Plunkett Street pedestrianised without the Inner Relief Road.
- 9.22 The provision of the Inner Relief Road with Main Street and Plunkett Street pedestrianised would reduce forecast traffic flows on Port Road, south of New Road. An increase is forecast on Port Road (South) with Main Street and Plunkett Street pedestrianised without the Inner Relief Road.

Study Recommendations Report

- 9.23 A Study Recommendations Report has been issued following consultation with Kerry County Council and Killarney Municipal District regarding this Modelling Report and the Study reports issued previously.

APPENDIX A

Modelling Outputs Key Locations



APPENDIX B

2017 Forecast Year Modelling Outputs

Link No.	Location	Base Year 2015						Do_minimum (DM) 2017						Difference (DM 2017 - Base 2015)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	444	430	13	5	28	EB	455	440	16	6	28	EB	12	9	2	0	0
2	St. Anne's Road	WB	130	127	3	2	28	WB	162	158	4	3	28	WB	32	31	1	0	0
3	Bohereen na Goun	NB	144	139	5	20	34	NB	153	147	6	21	34	NB	9	8	1	1	0
4	Bohereen na Goun	SB	179	179	0	41	24	SB	180	180	0	42	24	SB	1	1	0	1	0
5	St. Mary's St.	NB	130	127	3	40	27	NB	143	140	3	44	27	NB	13	12	0	4	0
6	Dalton's Avenue	EB	268	265	4	37	61	EB	279	275	4	39	61	EB	11	11	0	2	0
7	Dalton's Avenue	WB	168	166	3	21	61	WB	164	162	3	20	61	WB	-4	-4	0	-1	0
8	Park Road	EB	947	915	33	53	68	EB	971	936	35	54	68	EB	24	22	2	1	0
9	Park Road	WB	659	648	11	39	68	WB	710	697	13	41	68	WB	51	49	2	3	0
10	N71 South of Countess Road	NB	678	484	195	57	19	NB	691	485	206	57	19	NB	12	1	11	0	0
11	N71 South of Countess Road	SB	805	768	36	63	12	SB	824	784	39	64	12	SB	19	16	3	1	0
12	Mission Road west of Kenmare Place	EB	583	577	5	105	7	EB	585	579	6	105	7	EB	2	2	0	0	0
13	Mission Road west of Kenmare Place	WB	609	502	107	20	62	WB	648	531	117	22	62	WB	39	29	10	1	0
14	Port Road South of New Road	NB	609	545	64	44	64	NB	647	576	71	47	64	NB	39	31	8	3	0
15	Port Road South of New Road	SB	570	560	9	39	68	SB	582	572	10	40	68	SB	13	12	1	1	0
16	St Margaret's Road	NB	166	163	3	25	39	NB	177	173	4	27	39	NB	11	11	0	2	0
17	St Margaret's Road	SB	131	129	2	9	65	SB	154	151	3	10	65	SB	23	22	1	1	0
18	Rock Road South of Bypass	NB	593	583	10	87	22	NB	620	608	12	90	20	NB	26	25	1	3	-2
19	Rock Road South of Bypass	SB	690	672	18	36	61	SB	695	676	19	37	61	SB	5	4	1	0	0
20	N22 Killarney Bypass at Fire Station	WB	657	648	9	39	90	WB	645	634	10	39	90	WB	-12	-14	1	0	0
21	N22 Killarney Bypass at Fire Station	EB	570	560	9	49	86	EB	590	579	10	51	86	EB	20	19	1	2	0
22	Park Road west of Park Road Roundabout	EB	766	740	26	100	35	EB	788	759	29	100	31	EB	21	19	3	1	-4
23	Park Road west of Park Road Roundabout	WB	543	539	4	55	60	WB	578	574	4	59	60	WB	35	35	0	4	0
24	Countess Road south of Park Road	NB	351	309	42	37	25	NB	368	321	48	41	24	NB	17	11	6	4	-1
25	Countess Road south of Park Road	SB	312	310	2	24	54	SB	314	312	2	25	54	SB	2	2	0	0	0
26	Countess Road	EB	176	151	25	13	61	EB	172	147	25	13	61	EB	-5	-5	0	0	0
27	Countess Road	WB	401	372	29	34	61	WB	405	372	33	34	61	WB	3	0	3	0	0
28	Woodlawn Rd at N71	EB	573	455	118	36	53	EB	596	464	132	37	53	EB	23	9	14	1	0
29	Woodlawn Rd at N71	WB	171	169	1	58	18	WB	180	179	1	61	17	WB	10	9	0	3	0
30	Rookery Road South	NB	361	296	65	25	54	NB	387	312	75	26	54	NB	26	16	10	1	0
31	Rookery Road South	SB	99	95	4	13	47	SB	101	97	4	13	47	SB	2	2	0	0	0
32	Ballycasheen Road west of N22	EB	161	136	25	2	54	EB	157	131	26	1	54	EB	-4	-5	1	0	0
33	Ballycasheen Road west of N22	WB	58	57	1	7	53	WB	64	63	1	8	53	WB	6	6	0	1	0
34	Woodlawn Road between N22 and N71	EB	499	400	99	4	54	EB	521	409	111	4	54	EB	21	9	12	0	0
35	Woodlawn Road between N22 and N71	WB	87	86	1	1	54	WB	94	93	2	2	54	WB	7	7	0	0	0
36	Muckross South of Woodlawn	NB	944	866	80	111	2	NB	968	863	108	111	2	NB	25	-3	28	0	0
37	Muckross South of Woodlawn	SB	570	555	15	25	59	SB	585	569	16	26	59	SB	15	14	1	1	0
38	Rock Road North of New Road	NB	537	514	23	62	27	NB	577	552	26	67	27	NB	40	38	3	4	0
39	Rock Road North of New Road	SB	334	329	5	16	27	SB	340	335	5	17	27	SB	6	6	1	1	0
40	New Road East of St. Mary's Road	EB	235	230	5	63	21	EB	254	249	5	70	21	EB	20	19	1	6	-1
41	New Road East of St. Mary's Road	WB	225	217	8	14	28	WB	233	224	9	14	28	WB	8	7	1	0	0
42	High Street	NB	589	577	11	100	15	NB	588	577	12	101	13	NB	0	0	0	0	-2
43	New Street West of High Street	EB	154	151	3	17	37	EB	162	158	3	18	37	EB	8	8	0	1	0
44	New Street West of High Street	WB	202	193	9	19	37	WB	209	200	10	20	37	WB	7	6	1	1	0
45	College Road west of Lewis Road	EB	77	77	0	20	68	EB	81	81	0	21	68	EB	5	5	0	1	0
46	College Road west of Lewis Road	WB	330	320	10	43	43	WB	344	333	11	44	43	WB	14	14	1	2	0
47	Plunkett Street	WB	417	409	8	55	12	WB	431	421	9	57	12	WB	13	13	1	2	0
48	Lewis Road South of Bypass	NB	194	190	4	27	27	NB	198	194	4	27	27	NB	4	4	0	1	0
49	Lewis Road South of Bypass	SB	178	176	3	2	28	SB	180	177	3	2	28	SB	2	1	0	0	0
50	Ross Road	NB	272	272	0	100	1	NB	279	279	0	102	1	NB	7	7	0	3	0
51	Ross Road	SB	442	384	58	28	78	SB	454	392	61	28	78	SB	12	8	3	1	0
52	Inner Relief Road west of High St	EB	106	106	0	22	20	EB	109	109	0	22	20	EB	3	3	0	1	0
53	Inner Relief Road west of High St	WB	158	156	3	12	60	WB	163	160	3	13	60	WB	4	4	0	0	0

Link No.	Location	Do_minimum 2017						Inner Relief Road 2017						Difference (Inner Relief Road - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	431	413	19	5	28	EB	-24	-27	3	0	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	164	160	3	3	28	WB	2	2	0	0	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	360	347	13	50	34	NB	208	200	8	29	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	331	325	6	81	18	SB	152	145	6	39	-6
5	St. Mary's St.	NB	143	140	3	44	27	NB	130	126	3	33	29	NB	-13	-13	0	-10	2
6	Dalton's Avenue	EB	279	275	4	39	61	EB	267	263	4	37	61	EB	-13	-12	0	-1	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	157	154	3	19	61	WB	-7	-7	0	-1	0
8	Park Road	EB	971	936	35	54	68	EB	967	937	31	54	68	EB	-4	0	-4	0	0
9	Park Road	WB	710	697	13	41	68	WB	711	698	13	42	68	WB	1	1	0	0	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	684	483	201	56	19	NB	-7	-2	-5	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	825	786	39	64	12	SB	2	2	0	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	596	590	6	104	9	EB	12	11	0	-2	2
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	662	542	120	22	62	WB	15	12	3	1	0
14	Port Road South of New Road	NB	647	576	71	47	64	NB	628	558	70	44	64	NB	-20	-18	-1	-3	1
15	Port Road South of New Road	SB	582	572	10	40	68	SB	462	457	5	32	68	SB	-121	-115	-5	-8	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	134	131	3	21	40	NB	-43	-42	-1	-6	0
17	St Margaret's Road	SB	154	151	3	10	65	SB	132	129	2	9	65	SB	-22	-22	-1	-1	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	619	607	12	88	21	NB	0	0	0	-1	1
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	707	687	20	37	61	SB	12	11	1	1	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	646	635	11	39	90	WB	2	1	1	0	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	578	568	10	50	86	EB	-12	-11	0	-1	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	792	764	28	101	27	EB	4	5	-1	1	-3
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	573	570	4	59	60	WB	-5	-4	0	-1	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	380	331	49	42	24	NB	12	11	1	1	0
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	312	310	2	24	54	SB	-2	-2	0	0	0
26	Countess Road	EB	172	147	25	13	61	EB	180	156	24	14	61	EB	8	9	-1	1	0
27	Countess Road	WB	405	372	33	34	61	WB	404	371	33	34	61	WB	-1	-1	0	0	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	601	464	136	37	53	EB	5	1	4	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	177	175	1	60	18	WB	-3	-3	0	-1	0
30	Rookery Road South	NB	387	312	75	26	54	NB	392	315	77	26	54	NB	5	3	3	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	102	98	4	13	47	SB	1	1	0	0	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	158	131	27	1	54	EB	1	0	1	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	61	60	1	7	53	WB	-3	-3	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	526	410	115	4	54	EB	5	1	4	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	91	89	2	2	54	WB	-3	-3	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	856	115	110	2	NB	0	-7	7	-1	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	569	16	26	59	SB	0	0	0	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	557	534	23	65	27	NB	-20	-17	-3	-2	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	358	353	6	17	27	SB	18	18	0	0	1
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	174	171	4	59	21	EB	-80	-78	-2	-11	0
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	83	81	2	5	28	WB	-149	-143	-7	-9	0
42	High Street	NB	588	577	12	101	13	NB	376	373	3	103	6	NB	-213	-204	-9	2	-6
43	New Street West of High Street	EB	162	158	3	18	37	EB	86	84	2	9	37	EB	-76	-75	-1	-8	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	287	276	11	28	37	WB	78	76	1	8	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	74	74	0	20	68	EB	-7	-7	0	-1	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	306	296	10	41	43	WB	-38	-37	-1	-3	0
47	Plunkett Street	WB	431	421	9	57	12	WB	401	393	8	52	18	WB	-29	-28	-1	-5	6
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	192	188	4	27	27	NB	-6	-6	0	-1	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	176	173	3	2	28	SB	-4	-4	0	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	392	61	28	78	SB	0	0	0	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	366	358	8	85	14	EB	258	250	8	63	-6
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	351	340	12	27	61	WB	189	180	9	14	1
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	357	348	10	25	38	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	289	280	8	28	40	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						Gaelscoil Road 2017						Difference (Gaelscoil Road - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	458	443	16	6	28	EB	3	3	0	0	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	158	155	3	3	28	WB	-4	-4	0	0	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	152	147	6	21	34	NB	-1	-1	0	0	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	187	187	0	45	24	SB	8	8	0	3	0
5	St. Mary's St.	NB	143	140	3	44	27	NB	134	131	3	42	27	NB	-8	-8	0	-2	0
6	Dalton's Avenue	EB	279	275	4	39	61	EB	277	273	4	38	61	EB	-2	-2	0	0	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	162	159	3	20	61	WB	-2	-2	0	0	0
8	Park Road	EB	971	936	35	54	68	EB	971	937	34	54	68	EB	0	0	-1	0	0
9	Park Road	WB	710	697	13	41	68	WB	707	693	14	41	68	WB	-3	-3	0	0	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	684	481	202	56	19	NB	-7	-4	-3	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	824	785	38	64	12	SB	0	1	-1	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	589	584	6	105	7	EB	5	5	0	0	0
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	654	537	117	22	62	WB	6	7	0	0	0
14	Port Road South of New Road	NB	647	576	71	47	64	NB	649	578	71	47	64	NB	1	2	0	0	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	573	563	10	39	68	SB	-9	-9	0	-1	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	172	169	4	26	40	NB	-5	-5	0	-1	0
17	St Margaret's Road	SB	154	151	3	10	65	SB	150	148	3	10	65	SB	-4	-3	0	0	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	614	603	11	89	20	NB	-6	-5	0	-1	1
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	694	677	18	37	61	SB	-1	1	-1	0	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	656	648	9	40	90	WB	12	13	-2	1	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	588	578	10	54	86	EB	-1	-1	0	3	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	653	625	29	89	47	EB	-134	-134	0	-11	16
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	408	406	2	46	60	WB	-170	-168	-2	-13	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	379	330	49	35	27	NB	10	9	1	-5	3
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	318	315	2	25	54	SB	3	3	0	0	0
26	Countess Road	EB	172	147	25	13	61	EB	173	148	25	13	61	EB	1	2	0	0	0
27	Countess Road	WB	405	372	33	34	61	WB	403	371	31	34	61	WB	-2	-1	-2	0	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	597	464	133	37	53	EB	1	0	1	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	174	172	1	59	18	WB	-6	-6	0	-2	0
30	Rookery Road South	NB	387	312	75	26	54	NB	384	309	75	26	54	NB	-2	-3	0	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	94	91	3	12	47	SB	-7	-6	0	-1	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	154	127	27	1	54	EB	-3	-4	0	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	58	57	1	7	53	WB	-6	-6	0	-1	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	522	409	112	4	54	EB	1	0	1	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	88	87	1	1	54	WB	-6	-6	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	862	109	111	2	NB	0	-1	1	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	569	16	26	59	SB	0	0	0	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	567	541	26	65	27	NB	-10	-10	0	-1	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	342	336	5	16	27	SB	1	2	0	0	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	249	244	5	69	21	EB	-5	-5	0	-1	0
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	230	221	9	14	28	WB	-3	-2	0	0	0
42	High Street	NB	588	577	12	101	13	NB	589	577	12	101	13	NB	0	0	0	0	0
43	New Street West of High Street	EB	162	158	3	18	37	EB	158	155	3	17	37	EB	-4	-4	0	0	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	207	198	9	20	37	WB	-2	-2	0	0	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	81	81	0	21	68	EB	0	0	0	0	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	347	337	11	44	43	WB	3	3	0	0	0
47	Plunkett Street	WB	431	421	9	57	12	WB	433	424	9	57	12	WB	3	3	0	0	0
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	177	173	4	26	27	NB	-22	-21	-1	-2	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	171	169	2	2	28	SB	-9	-9	0	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	391	62	28	78	SB	0	-1	1	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	109	109	0	22	20	EB	0	0	0	0	0
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	163	160	3	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	187	183	3	2	40	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	217	214	3	24	40	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						Outer Relief Road Link 2017						Difference (Outer Relief Road Link - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	453	439	14	6	28	EB	-3	-1	-2	0	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	184	181	2	3	28	WB	22	23	-1	0	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	154	150	3	21	34	NB	1	3	-2	0	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	170	170	0	40	24	SB	-10	-10	0	-2	0
5	St. Mary's St.	NB	143	140	3	44	27	NB	153	152	2	46	27	NB	11	12	-1	3	0
6	Dalton's Avenue	EB	279	275	4	39	61	EB	271	268	3	38	61	EB	-8	-8	-1	-1	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	152	150	2	19	61	WB	-12	-11	-1	-1	0
8	Park Road	EB	971	936	35	54	68	EB	940	919	21	53	68	EB	-31	-18	-14	-1	0
9	Park Road	WB	710	697	13	41	68	WB	779	772	7	46	68	WB	69	75	-6	4	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	568	464	104	55	19	NB	-122	-21	-102	-1	1
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	807	790	18	64	12	SB	-16	6	-22	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	581	577	4	104	7	EB	-3	-2	-1	-1	1
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	633	571	62	23	62	WB	-14	41	-55	2	0
14	Port Road South of New Road	NB	647	576	71	47	64	NB	628	591	37	48	64	NB	-19	15	-34	1	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	591	583	9	41	68	SB	9	10	-1	1	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	197	193	4	29	39	NB	20	20	0	2	0
17	St Margaret's Road	SB	154	151	3	10	65	SB	166	164	2	11	65	SB	12	12	-1	1	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	630	620	11	93	17	NB	11	12	-1	3	-2
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	686	667	18	36	61	SB	-10	-9	-1	0	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	650	636	14	39	90	WB	5	1	4	0	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	622	615	8	54	86	EB	33	35	-3	3	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	681	671	10	103	18	EB	-107	-88	-18	3	-13
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	620	614	7	64	60	WB	42	40	3	5	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	298	286	12	40	22	NB	-70	-35	-36	-1	-1
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	303	301	2	24	54	SB	-11	-11	0	-1	0
26	Countess Road	EB	172	147	25	13	61	EB	145	134	11	12	61	EB	-26	-13	-14	-1	0
27	Countess Road	WB	405	372	33	34	61	WB	412	402	10	37	61	WB	7	30	-23	2	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	484	458	27	37	53	EB	-112	-6	-105	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	192	191	1	45	18	WB	12	12	0	-16	0
30	Rookery Road South	NB	387	312	75	26	54	NB	367	350	16	29	54	NB	-20	38	-58	3	0
31	Rookery Road South	SB	101	97	4	13	47	SB	105	103	2	14	47	SB	4	6	-2	0	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	93	89	4	1	54	EB	-65	-42	-23	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	98	97	1	11	53	WB	34	34	0	4	-1
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	410	388	22	4	54	EB	-111	-21	-90	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	106	105	1	2	54	WB	11	12	-1	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	740	740	0	49	5	NB	-228	-123	-108	-62	3
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	587	579	8	25	60	SB	2	11	-9	-1	1
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	608	585	23	70	27	NB	31	34	-3	4	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	339	334	5	17	27	SB	-1	-1	-1	0	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	261	258	3	73	20	EB	7	9	-2	3	-1
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	232	224	8	14	28	WB	-1	0	-1	0	0
42	High Street	NB	588	577	12	101	13	NB	584	577	7	101	13	NB	-4	0	-5	0	0
43	New Street West of High Street	EB	162	158	3	18	37	EB	166	163	2	18	37	EB	4	5	-1	1	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	207	202	6	20	37	WB	-2	2	-4	0	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	82	82	0	21	68	EB	1	1	0	0	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	354	348	6	46	43	WB	10	14	-5	2	0
47	Plunkett Street	WB	431	421	9	57	12	WB	439	434	5	59	12	WB	9	13	-4	2	0
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	229	226	4	30	27	NB	31	31	-1	3	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	189	186	3	2	28	SB	9	9	0	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	420	34	30	78	SB	0	28	-28	2	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	109	109	0	22	20	EB	0	0	0	0	0
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	163	161	2	13	60	WB	0	1	-1	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	231	231	N/A	17	77	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	2	2	N/A	0	78	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						Glebe Link Road 2017						Difference (Glebe Link Road - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	289	279	9	4	28	EB	-167	-161	-6	-2	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	109	107	1	2	28	WB	-53	-51	-2	-1	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	152	148	5	21	34	NB	0	1	-1	0	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	196	196	0	49	23	SB	16	16	0	7	-1
5	St. Mary's St.	NB	143	140	3	44	27	NB	126	124	2	37	28	NB	-16	-16	-1	-6	1
6	Dalton's Avenue	EB	279	275	4	39	61	EB	251	248	3	35	61	EB	-29	-28	-1	-3	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	164	162	2	20	61	WB	0	0	-1	0	0
8	Park Road	EB	971	936	35	54	68	EB	1024	997	26	58	68	EB	53	61	-8	4	0
9	Park Road	WB	710	697	13	41	68	WB	739	725	14	43	68	WB	29	29	0	2	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	686	482	204	56	19	NB	-5	-3	-1	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	825	789	36	64	12	SB	2	5	-3	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	546	541	5	97	24	EB	-39	-38	-1	-8	18
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	647	531	116	22	62	WB	-1	0	-1	1	0
14	Port Road South of New Road	NB	647	576	71	47	64	NB	662	589	73	48	64	NB	15	13	2	1	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	645	636	8	44	68	SB	62	64	-2	4	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	176	173	3	30	38	NB	-1	0	-1	3	-2
17	St Margaret's Road	SB	154	151	3	10	65	SB	117	115	2	8	65	SB	-37	-36	-1	-2	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	597	586	10	86	22	NB	-23	-21	-1	-4	2
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	697	680	17	37	62	SB	2	4	-2	0	1
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	618	609	10	37	90	WB	-26	-25	-1	-2	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	524	516	8	46	86	EB	-66	-64	-2	-5	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	810	784	25	101	30	EB	22	25	-3	0	-1
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	573	570	3	59	60	WB	-5	-4	-1	0	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	371	323	48	41	24	NB	2	3	0	0	0
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	314	312	2	25	54	SB	0	0	-1	0	0
26	Countess Road	EB	172	147	25	13	61	EB	184	158	25	14	61	EB	12	12	1	1	0
27	Countess Road	WB	405	372	33	34	61	WB	407	376	32	35	61	WB	2	4	-1	0	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	596	465	131	37	53	EB	0	1	-1	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	174	173	1	59	18	WB	-6	-6	0	-2	0
30	Rookery Road South	NB	387	312	75	26	54	NB	388	314	74	26	54	NB	1	2	0	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	109	105	5	14	47	SB	8	8	1	1	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	158	132	26	2	54	EB	1	2	-1	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	58	57	1	7	53	WB	-6	-6	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	521	410	111	4	54	EB	0	1	-1	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	88	87	2	1	54	WB	-6	-6	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	864	108	111	2	NB	0	1	0	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	570	15	26	59	SB	0	1	-1	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	556	533	23	63	27	NB	-21	-19	-2	-3	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	338	333	5	16	27	SB	-2	-2	0	0	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	211	207	4	61	21	EB	-43	-42	-1	-9	1
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	184	178	6	11	28	WB	-49	-46	-3	-3	0
42	High Street	NB	588	577	12	101	13	NB	462	450	12	52	28	NB	-126	-127	0	-48	15
43	New Street West of High Street	EB	162	158	3	18	37	EB	344	339	5	38	37	EB	182	180	2	20	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	290	279	11	28	37	WB	81	79	2	8	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	321	314	7	39	68	EB	240	233	7	18	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	371	363	9	51	42	WB	27	29	-2	7	-2
47	Plunkett Street	WB	431	421	9	57	12	WB	360	353	7	48	23	WB	-71	-69	-2	-9	11
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	201	197	3	27	27	NB	2	3	-1	0	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	166	163	2	2	28	SB	-15	-14	-1	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	392	62	28	78	SB	0	0	0	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	109	109	0	13	24	EB	0	0	0	-9	4
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	163	160	3	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
62	Glebe Link Road	NB	N/A	N/A	N/A	N/A	N/A	NB	255	251	4	59	31	NB	N/A	N/A	N/A	N/A	N/A
63	Glebe Link Road	SB	N/A	N/A	N/A	N/A	N/A	SB	420	408	12	82	40	SB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						Main Street Pedestrianised 2017						Difference (Main Street Pedestrianised - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	411	397	14	5	28	EB	-44	-42	-2	0	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	264	260	4	4	28	WB	102	102	1	1	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	125	117	8	17	34	NB	-27	-30	3	-4	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	198	198	0	47	23	SB	18	18	0	5	-1
5	St. Mary's St.	NB	143	140	3	44	27	NB	97	94	4	33	27	NB	-45	-46	1	-10	0
6	Dalton's Avenue	EB	279	275	4	39	61	EB	252	249	3	35	61	EB	-27	-26	-1	-3	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	158	156	2	19	61	WB	-7	-6	-1	-1	0
8	Park Road	EB	971	936	35	54	68	EB	979	959	20	55	68	EB	8	22	-15	1	0
9	Park Road	WB	710	697	13	41	68	WB	698	684	14	41	68	WB	-12	-12	1	-1	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	687	483	204	57	18	NB	-4	-2	-2	1	-1
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	821	791	30	65	12	SB	-2	7	-9	1	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	674	668	7	102	13	EB	90	89	1	-3	6
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	1126	963	162	41	57	WB	478	433	45	19	-5
14	Port Road South of New Road	NB	647	576	71	47	64	NB	624	558	67	44	64	NB	-23	-19	-4	-3	1
15	Port Road South of New Road	SB	582	572	10	40	68	SB	673	661	11	46	68	SB	90	89	1	6	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	197	193	4	32	38	NB	20	20	0	5	-1
17	St Margaret's Road	SB	154	151	3	10	65	SB	134	132	2	9	65	SB	-20	-19	-1	-1	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	601	591	10	88	21	NB	-19	-17	-2	-2	1
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	688	669	19	36	62	SB	-7	-7	0	0	1
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	629	620	9	38	90	WB	-16	-14	-1	-1	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	555	546	9	48	86	EB	-35	-33	-1	-3	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	798	774	24	100	31	EB	10	15	-5	0	0
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	574	571	4	59	60	WB	-4	-3	0	0	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	399	349	51	42	24	NB	31	28	3	2	0
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	352	350	2	28	54	SB	38	38	-1	3	0
26	Countess Road	EB	172	147	25	13	61	EB	199	173	26	15	61	EB	28	27	1	2	0
27	Countess Road	WB	405	372	33	34	61	WB	435	404	31	37	61	WB	30	32	-2	3	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	597	465	132	37	53	EB	1	1	0	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	179	178	1	61	18	WB	-1	-1	0	0	0
30	Rookery Road South	NB	387	312	75	26	54	NB	387	312	75	26	54	NB	0	0	0	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	106	102	4	14	47	SB	5	5	0	1	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	158	132	26	2	54	EB	1	2	0	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	63	62	1	7	53	WB	-1	-1	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	522	410	111	4	54	EB	1	1	0	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	94	92	1	2	54	WB	-1	-1	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	862	109	111	2	NB	0	-1	1	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	572	13	26	59	SB	0	4	-4	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	593	570	23	67	27	NB	16	18	-2	1	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	343	338	5	17	27	SB	3	3	0	1	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	191	188	4	61	21	EB	-63	-62	-1	-9	0
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	258	250	9	16	28	WB	26	26	0	2	0
42	High Street	NB	588	577	12	101	13	NB	540	521	19	62	27	NB	-48	-56	8	-38	14
43	New Street West of High Street	EB	162	158	3	18	37	EB	499	461	39	5	37	EB	338	302	35	-13	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	0	0	0	0	37	WB	-209	-200	-10	-20	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	108	108	0	24	68	EB	26	26	0	3	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	141	138	3	19	44	WB	-203	-195	-8	-25	1
47	Plunkett Street	WB	431	421	9	57	12	WB	162	160	2	2	48	WB	-269	-262	-7	-55	36
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	209	205	4	28	27	NB	10	11	0	1	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	172	169	2	2	28	SB	-8	-8	0	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	395	59	29	78	SB	0	3	-3	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	109	109	0	14	23	EB	0	0	0	-8	3
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	163	160	3	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						Main St and Plunkett St Pedestrianised 2017						Difference (Main St & Plunkett St Pedestrianised - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	408	394	14	5	28	EB	-48	-46	-2	0	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	283	279	4	4	28	WB	122	121	1	1	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	126	119	8	17	34	NB	-26	-29	2	-4	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	197	197	0	48	23	SB	17	17	0	6	-1
5	St. Mary's St.	NB	143	140	3	44	27	NB	99	96	3	34	27	NB	-44	-44	1	-9	0
6	Dalton's Avenue	EB	279	275	4	39	61	EB	246	243	3	35	61	EB	-33	-32	-1	-4	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	158	155	2	19	61	WB	-7	-6	-1	-1	0
8	Park Road	EB	971	936	35	54	68	EB	995	971	23	56	68	EB	24	35	-11	2	0
9	Park Road	WB	710	697	13	41	68	WB	728	715	13	43	68	WB	18	18	0	1	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	687	484	204	57	18	NB	-3	-1	-2	0	-1
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	830	798	32	65	12	SB	6	14	-8	1	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	672	666	7	102	12	EB	88	87	1	-3	5
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	1061	902	160	38	57	WB	414	371	43	16	-5
14	Port Road South of New Road	NB	647	576	71	47	64	NB	612	547	65	44	64	NB	-35	-29	-6	-3	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	694	683	11	47	68	SB	112	110	1	8	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	214	210	4	35	38	NB	37	37	0	8	-2
17	St Margaret's Road	SB	154	151	3	10	65	SB	128	126	2	9	65	SB	-26	-25	-1	-1	-1
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	603	593	10	88	21	NB	-16	-15	-2	-2	1
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	694	676	19	37	61	SB	-1	0	0	0	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	618	610	8	37	90	WB	-27	-24	-2	-2	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	556	548	9	48	86	EB	-33	-32	-1	-3	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	805	781	25	100	36	EB	18	22	-4	-1	5
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	598	594	4	61	60	WB	19	20	0	2	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	381	333	48	42	23	NB	12	12	0	2	0
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	336	334	2	26	54	SB	21	22	-1	2	0
26	Countess Road	EB	172	147	25	13	61	EB	178	155	24	14	61	EB	7	8	-1	1	0
27	Countess Road	WB	405	372	33	34	61	WB	420	389	32	36	61	WB	16	17	-1	1	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	597	466	131	37	53	EB	1	2	-1	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	171	170	1	58	18	WB	-9	-9	0	-3	0
30	Rookery Road South	NB	387	312	75	26	54	NB	389	314	75	26	54	NB	2	2	0	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	103	100	4	13	47	SB	2	3	0	0	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	156	130	26	1	54	EB	-1	0	-1	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	55	54	1	7	53	WB	-9	-9	0	-1	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	522	411	111	4	54	EB	1	2	0	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	86	84	1	1	54	WB	-9	-8	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	863	108	111	2	NB	0	1	0	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	572	13	26	59	SB	0	3	-3	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	609	585	23	68	27	NB	31	34	-2	2	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	346	340	5	17	27	SB	6	6	0	1	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	192	188	4	62	21	EB	-63	-61	-1	-8	0
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	271	262	9	16	28	WB	38	38	0	2	0
42	High Street	NB	588	577	12	101	13	NB	542	524	19	62	27	NB	-46	-53	7	-38	14
43	New Street West of High Street	EB	162	158	3	18	37	EB	501	465	37	5	37	EB	340	306	33	-13	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	253	253	0	40	68	EB	172	172	0	19	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	80	78	2	1	68	WB	-264	-256	-9	-43	25
47	Plunkett Street	WB	431	421	9	57	12	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	206	203	4	28	27	NB	8	9	-1	1	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	158	156	2	2	28	SB	-22	-22	-1	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	395	59	29	78	SB	0	3	-3	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	109	109	0	14	23	EB	0	0	0	-8	3
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	163	160	3	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						New Street Eastbound Only 2017						Difference (New Street Eastbound Only - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	454	438	16	6	28	EB	-2	-2	0	0	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	181	178	4	3	28	WB	20	19	0	0	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	151	142	9	20	34	NB	-1	-5	3	-1	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	187	187	0	44	24	SB	7	7	0	2	0
5	St. Mary's St.	NB	143	140	3	44	27	NB	134	129	5	42	27	NB	-8	-10	2	-2	0
6	Dalton's Avenue	EB	279	275	4	39	61	EB	278	273	4	38	61	EB	-2	-2	0	0	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	159	156	3	20	61	WB	-6	-5	0	-1	0
8	Park Road	EB	971	936	35	54	68	EB	972	942	29	54	68	EB	1	6	-5	0	0
9	Park Road	WB	710	697	13	41	68	WB	709	695	14	41	68	WB	-1	-1	0	0	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	684	483	201	57	18	NB	-7	-2	-5	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	824	787	38	64	12	SB	1	2	-2	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	606	600	6	105	7	EB	21	21	0	0	1
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	832	697	135	28	61	WB	184	167	18	7	-1
14	Port Road South of New Road	NB	647	576	71	47	64	NB	642	570	72	46	64	NB	-5	-6	1	0	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	605	593	12	41	68	SB	22	21	1	2	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	179	175	4	28	39	NB	2	1	0	1	0
17	St Margaret's Road	SB	154	151	3	10	65	SB	151	148	3	10	65	SB	-3	-3	0	0	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	619	607	12	90	20	NB	0	0	0	0	0
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	695	676	20	37	61	SB	0	-1	1	0	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	641	631	10	39	90	WB	-4	-4	0	0	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	581	571	10	50	86	EB	-9	-9	0	-1	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	791	764	27	101	29	EB	4	5	-2	0	-1
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	580	576	4	60	60	WB	2	2	0	0	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	380	330	49	42	24	NB	11	10	1	1	0
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	327	324	2	26	54	SB	12	13	0	1	0
26	Countess Road	EB	172	147	25	13	61	EB	177	152	24	14	61	EB	5	6	-1	0	0
27	Countess Road	WB	405	372	33	34	61	WB	414	381	32	35	61	WB	9	9	0	1	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	599	464	136	37	53	EB	4	0	4	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	176	175	1	60	18	WB	-4	-4	0	-1	0
30	Rookery Road South	NB	387	312	75	26	54	NB	390	313	77	26	54	NB	3	1	2	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	101	98	4	13	47	SB	1	1	0	0	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	158	131	27	1	54	EB	1	0	1	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	60	60	1	7	53	WB	-3	-3	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	524	410	115	4	54	EB	4	0	3	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	91	89	1	2	54	WB	-3	-3	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	856	114	110	2	NB	0	-6	7	-1	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	569	16	26	59	SB	0	1	-1	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	583	556	27	67	27	NB	5	4	1	0	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	341	336	6	17	27	SB	1	1	0	0	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	250	244	6	70	20	EB	-5	-6	1	0	0
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	249	240	10	15	28	WB	17	16	1	1	0
42	High Street	NB	588	577	12	101	13	NB	590	578	12	101	12	NB	2	1	0	0	0
43	New Street West of High Street	EB	162	158	3	18	37	EB	151	146	5	16	37	EB	-11	-12	1	-1	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	78	78	0	20	68	EB	-3	-3	0	0	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	288	279	8	38	44	WB	-57	-54	-3	-6	0
47	Plunkett Street	WB	431	421	9	57	12	WB	372	366	7	48	29	WB	-58	-56	-2	-8	17
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	200	196	4	28	27	NB	2	2	0	0	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	178	175	3	2	28	SB	-2	-2	0	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	393	61	28	78	SB	0	1	-1	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	109	109	0	22	20	EB	0	0	0	0	0
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	163	159	3	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						New Street Upper Westbound Only 2017						Difference (New Street Upper Westbound Only - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	485	467	18	6	28	EB	29	27	2	0	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	154	150	3	3	28	WB	-8	-8	0	0	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	199	189	10	27	34	NB	46	42	4	6	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	157	157	0	34	25	SB	-22	-22	0	-8	2
5	St. Mary's St.	NB	143	140	3	44	27	NB	211	205	6	60	25	NB	68	65	3	16	-1
6	Dalton's Avenue	EB	279	275	4	39	61	EB	307	302	5	42	61	EB	27	26	1	3	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	163	160	3	20	61	WB	-1	-2	0	0	0
8	Park Road	EB	971	936	35	54	68	EB	958	922	36	53	68	EB	-13	-15	1	-1	0
9	Park Road	WB	710	697	13	41	68	WB	689	676	13	40	68	WB	-21	-21	0	-1	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	690	484	206	56	19	NB	-1	-1	0	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	827	786	41	64	12	SB	4	2	2	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	593	587	6	108	5	EB	8	8	1	3	-2
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	657	538	118	22	61	WB	9	8	1	0	-1
14	Port Road South of New Road	NB	647	576	71	47	64	NB	649	582	67	50	63	NB	1	6	-4	3	-1
15	Port Road South of New Road	SB	582	572	10	40	68	SB	548	537	11	37	68	SB	-35	-35	1	-3	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	190	185	4	28	40	NB	13	12	1	1	0
17	St Margaret's Road	SB	154	151	3	10	65	SB	193	189	4	12	66	SB	39	38	1	2	1
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	632	618	14	94	17	NB	12	10	2	4	-3
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	677	658	19	35	61	SB	-18	-18	0	-1	-1
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	667	657	11	40	90	WB	22	22	0	1	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	610	598	12	53	86	EB	20	19	2	2	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	766	738	28	100	31	EB	-22	-21	-1	0	0
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	562	558	4	58	60	WB	-16	-16	0	-1	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	362	315	47	39	24	NB	-6	-5	-1	-2	1
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	322	320	3	25	54	SB	8	8	0	1	0
26	Countess Road	EB	172	147	25	13	61	EB	159	135	23	12	61	EB	-13	-11	-2	-1	0
27	Countess Road	WB	405	372	33	34	61	WB	402	371	31	34	61	WB	-2	-1	-2	0	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	594	463	130	37	53	EB	-2	-1	-1	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	173	172	1	59	18	WB	-7	-7	0	-2	0
30	Rookery Road South	NB	387	312	75	26	54	NB	384	311	73	26	54	NB	-3	-1	-1	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	102	98	4	13	47	SB	1	1	0	0	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	160	134	27	2	54	EB	3	3	0	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	57	57	1	7	53	WB	-7	-7	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	518	408	110	4	54	EB	-2	-1	-1	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	87	86	1	1	54	WB	-7	-7	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	863	108	111	2	NB	0	0	0	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	568	17	26	59	SB	0	-1	1	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	595	566	29	69	27	NB	18	14	4	2	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	336	330	5	16	27	SB	-4	-4	0	0	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	346	337	9	88	17	EB	91	88	4	18	-3
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	232	222	10	14	28	WB	-1	-2	1	0	0
42	High Street	NB	588	577	12	101	13	NB	554	538	16	63	27	NB	-35	-39	4	-37	14
43	New Street West of High Street	EB	162	158	3	18	37	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
44	New Street West of High Street	WB	209	200	10	20	37	WB	151	142	9	24	26	WB	-58	-58	0	4	-11
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	83	83	0	21	68	EB	2	2	0	0	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	353	341	11	44	43	WB	9	8	1	0	0
47	Plunkett Street	WB	431	421	9	57	12	WB	433	423	9	59	10	WB	2	1	0	2	-3
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	201	197	4	28	27	NB	3	3	0	1	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	205	201	4	2	28	SB	25	24	1	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	391	63	28	78	SB	0	-2	2	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	109	109	0	14	23	EB	0	0	0	-8	3
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	163	159	3	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						New Road Eastbound Only 2017						Difference (New Road Eastbound Only - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	513	492	21	6	28	EB	58	52	6	1	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	210	206	5	3	28	WB	49	48	1	0	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	144	138	6	20	34	NB	-8	-9	0	-1	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	206	206	0	50	23	SB	27	27	0	8	-1
5	St. Mary's St.	NB	143	140	3	44	27	NB	107	105	3	31	29	NB	-35	-35	0	-13	2
6	Dalton's Avenue	EB	279	275	4	39	61	EB	289	285	4	41	61	EB	9	9	0	2	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	119	116	2	15	61	WB	-46	-45	0	-6	0
8	Park Road	EB	971	936	35	54	68	EB	969	935	34	54	68	EB	-2	-1	-1	0	0
9	Park Road	WB	710	697	13	41	68	WB	716	702	14	42	68	WB	6	5	0	0	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	691	483	208	56	19	NB	0	-2	2	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	826	787	39	64	12	SB	2	2	0	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	555	550	5	106	6	EB	-30	-29	-1	1	-1
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	687	569	118	23	62	WB	39	39	1	1	0
14	Port Road South of New Road	NB	647	576	71	47	64	NB	679	608	70	50	63	NB	31	32	-1	3	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	467	461	6	32	68	SB	-115	-111	-4	-8	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	332	323	9	49	38	NB	155	150	5	22	-2
17	St Margaret's Road	SB	154	151	3	10	65	SB	174	171	3	11	65	SB	20	20	1	2	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	635	622	13	92	18	NB	15	14	1	2	-2
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	694	674	20	37	61	SB	-1	-2	1	0	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	640	630	10	39	90	WB	-5	-4	-1	0	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	595	584	11	52	86	EB	5	5	0	0	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	794	765	29	100	32	EB	6	6	0	0	2
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	597	593	4	61	60	WB	19	19	0	2	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	373	325	48	42	23	NB	4	4	0	1	0
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	324	321	2	25	54	SB	9	9	0	1	0
26	Countess Road	EB	172	147	25	13	61	EB	167	143	24	13	61	EB	-4	-4	0	0	0
27	Countess Road	WB	405	372	33	34	61	WB	405	374	31	34	61	WB	1	2	-2	0	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	591	463	128	37	53	EB	-4	-1	-4	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	174	172	1	59	18	WB	-7	-6	0	-2	0
30	Rookery Road South	NB	387	312	75	26	54	NB	385	312	73	26	54	NB	-2	0	-2	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	100	96	4	13	47	SB	-1	-1	0	0	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	156	130	26	1	54	EB	-1	-1	-1	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	58	57	1	7	53	WB	-6	-6	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	516	408	108	4	54	EB	-4	-1	-3	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	88	87	1	1	54	WB	-6	-6	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	862	108	111	2	NB	0	-1	0	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	569	16	26	59	SB	0	0	0	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	727	695	32	82	27	NB	149	143	6	16	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	293	288	5	21	28	SB	-47	-47	0	5	1
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	277	271	6	85	17	EB	23	22	1	15	-3
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
42	High Street	NB	588	577	12	101	13	NB	586	572	13	101	12	NB	-3	-5	2	0	-1
43	New Street West of High Street	EB	162	158	3	18	37	EB	169	165	4	18	37	EB	7	7	0	1	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	259	245	14	24	37	WB	50	45	5	5	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	86	86	0	21	68	EB	5	5	0	1	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	404	393	12	49	43	WB	60	59	1	4	0
47	Plunkett Street	WB	431	421	9	57	12	WB	470	460	10	64	9	WB	39	39	1	7	-4
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	197	192	4	28	27	NB	-1	-2	0	0	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	182	179	3	2	28	SB	2	2	0	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	391	63	28	78	SB	0	-1	1	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	109	109	0	22	20	EB	0	0	0	0	0
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	163	159	3	13	60	WB	0	-1	1	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						N22/Lewis Rd Banned RT 2017						Difference (N22/Lewis Rd Banned RT 2017 - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	473	458	16	6	28	EB	18	18	0	0	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	241	236	5	3	28	WB	79	78	1	1	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	162	156	6	22	34	NB	9	9	0	1	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	173	173	0	41	24	SB	-6	-6	0	-1	0
5	St. Mary's St.	NB	143	140	3	44	27	NB	158	155	3	47	27	NB	15	15	0	4	0
6	Dalton's Avenue	EB	279	275	4	39	61	EB	321	315	5	44	61	EB	41	40	1	5	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	126	123	2	15	61	WB	-39	-38	-1	-5	0
8	Park Road	EB	971	936	35	54	68	EB	1049	1015	34	59	68	EB	79	79	0	5	0
9	Park Road	WB	710	697	13	41	68	WB	765	751	14	45	68	WB	55	54	1	3	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	689	484	205	57	19	NB	-1	-1	-1	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	827	787	40	64	12	SB	3	2	1	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	592	586	6	105	7	EB	7	7	0	0	0
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	691	570	121	24	62	WB	43	39	4	2	0
14	Port Road South of New Road	NB	647	576	71	47	64	NB	682	605	76	49	64	NB	35	29	5	2	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	604	593	10	41	68	SB	21	21	0	1	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	195	190	4	29	39	NB	18	17	1	2	0
17	St Margaret's Road	SB	154	151	3	10	65	SB	175	171	4	11	65	SB	21	20	1	1	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	662	647	15	92	19	NB	42	39	3	3	-1
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	720	699	21	38	61	SB	25	23	2	2	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	594	580	13	35	90	WB	-51	-54	3	-4	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	509	496	13	44	86	EB	-81	-84	3	-7	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	851	821	30	102	22	EB	63	62	1	2	-8
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	628	623	6	64	60	WB	50	49	2	5	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	366	318	48	43	22	NB	-3	-2	0	3	-1
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	326	323	3	25	54	SB	11	11	0	1	0
26	Countess Road	EB	172	147	25	13	61	EB	182	155	27	14	61	EB	10	9	2	1	0
27	Countess Road	WB	405	372	33	34	61	WB	413	379	34	35	61	WB	9	7	2	1	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	596	463	133	37	53	EB	0	-1	1	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	176	174	2	60	18	WB	-4	-4	0	-1	0
30	Rookery Road South	NB	387	312	75	26	54	NB	384	309	75	26	54	NB	-3	-3	0	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	114	110	4	15	47	SB	13	13	1	2	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	165	138	27	2	54	EB	7	7	0	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	60	59	1	7	53	WB	-4	-4	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	521	409	113	4	54	EB	1	0	1	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	90	89	2	2	54	WB	-4	-4	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	862	109	111	2	NB	0	-1	1	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	568	17	26	59	SB	0	0	1	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	669	640	29	76	27	NB	92	89	3	9	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	337	331	6	17	27	SB	-3	-4	1	1	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	274	268	6	82	18	EB	19	19	0	12	-3
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	229	220	9	14	28	WB	-4	-3	0	0	0
42	High Street	NB	588	577	12	101	13	NB	588	578	11	101	12	NB	0	1	-1	0	-1
43	New Street West of High Street	EB	162	158	3	18	37	EB	180	177	4	20	37	EB	19	18	0	2	0
44	New Street West of High Street	WB	209	200	10	20	37	WB	221	211	10	21	37	WB	11	11	0	1	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	84	84	0	21	68	EB	3	3	0	0	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	364	353	11	46	43	WB	20	20	0	2	0
47	Plunkett Street	WB	431	421	9	57	12	WB	447	438	9	59	12	WB	17	17	0	2	0
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	91	89	2	16	27	NB	-108	-106	-2	-12	-1
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	125	123	2	2	28	SB	-56	-54	-1	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	392	62	28	78	SB	0	0	0	0	0
52	Inner Relief Road west of High St	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
53	Inner Relief Road west of High St	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
62	Glebe Link Road	NB	N/A	N/A	N/A	N/A	N/A	NB	N/A	N/A	N/A	N/A	N/A	NB	N/A	N/A	N/A	N/A	N/A
63	Glebe Link Road	SB	N/A	N/A	N/A	N/A	N/A	SB	N/A	N/A	N/A	N/A	N/A	SB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2017						Main St Pedestrian and IRR 2017						Difference (Main St Pedestrian and IRR - Do_minimum 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	405	392	13	5	28	EB	-51	-48	-3	-1	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	270	266	4	4	28	WB	108	108	0	1	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	249	235	14	34	34	NB	97	88	9	13	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	375	368	7	83	19	SB	195	189	7	41	-5
5	St. Mary's St.	NB	143	140	3	44	27	NB	111	108	4	30	29	NB	-31	-32	1	-14	2
6	Dalton's Avenue	EB	279	275	4	39	61	EB	253	250	3	36	61	EB	-27	-26	-1	-3	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	161	159	2	20	61	WB	-3	-3	-1	0	0
8	Park Road	EB	971	936	35	54	68	EB	983	964	19	56	68	EB	12	28	-16	2	0
9	Park Road	WB	710	697	13	41	68	WB	700	685	14	41	68	WB	-10	-11	1	-1	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	682	479	202	56	18	NB	-9	-6	-3	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	819	790	29	64	12	SB	-5	5	-10	0	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	680	673	7	102	14	EB	95	94	1	-3	7
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	1117	954	163	40	57	WB	469	423	46	18	-5
14	Port Road South of New Road	NB	647	576	71	47	64	NB	612	546	66	44	64	NB	-35	-30	-6	-3	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	518	513	5	35	68	SB	-65	-59	-5	-4	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	164	162	2	27	38	NB	-13	-11	-1	0	-1
17	St Margaret's Road	SB	154	151	3	10	65	SB	125	123	2	8	65	SB	-29	-28	-1	-2	0
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	601	592	9	88	21	NB	-19	-16	-3	-2	1
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	689	672	18	36	61	SB	-6	-5	-1	0	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	635	626	9	38	90	WB	-10	-9	-1	-1	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	557	549	8	49	86	EB	-33	-31	-2	-3	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	792	770	23	101	30	EB	5	11	-6	0	-1
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	568	565	3	59	60	WB	-10	-9	-1	0	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	392	343	49	42	24	NB	24	22	1	1	1
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	347	345	2	27	54	SB	33	33	-1	3	0
26	Countess Road	EB	172	147	25	13	61	EB	186	162	24	14	61	EB	14	16	-1	1	0
27	Countess Road	WB	405	372	33	34	61	WB	423	394	29	36	61	WB	18	22	-4	2	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	597	466	131	37	53	EB	1	2	-1	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	176	175	1	60	18	WB	-4	-4	0	-1	0
30	Rookery Road South	NB	387	312	75	26	54	NB	385	311	74	26	54	NB	-2	-1	-1	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	104	100	4	14	47	SB	3	4	0	0	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	158	132	26	2	54	EB	1	1	0	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	59	59	1	7	53	WB	-4	-4	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	522	411	111	4	54	EB	1	2	-1	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	91	89	1	2	54	WB	-4	-3	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	862	109	111	2	NB	0	-1	1	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	573	13	26	59	SB	0	4	-4	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	570	551	19	66	27	NB	-7	-1	-6	-1	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	343	338	5	17	27	SB	3	3	0	0	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	153	150	3	55	21	EB	-102	-99	-2	-15	0
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	88	86	2	5	28	WB	-145	-138	-7	-9	0
42	High Street	NB	588	577	12	101	13	NB	437	423	13	65	23	NB	-152	-153	2	-36	10
43	New Street West of High Street	EB	162	158	3	18	37	EB	437	423	13	65	23	EB	275	265	10	47	-14
44	New Street West of High Street	WB	209	200	10	20	37	WB	0	0	0	0	37	WB	-209	-200	-10	-20	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	107	107	0	24	68	EB	26	26	0	3	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	134	131	3	18	44	WB	-210	-202	-8	-26	1
47	Plunkett Street	WB	431	421	9	57	12	WB	154	152	2	2	48	WB	-276	-269	-7	-55	36
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	207	204	3	28	27	NB	9	10	-1	0	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	174	172	2	2	28	SB	-6	-6	-1	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	393	60	29	78	SB	0	1	-1	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	265	257	7	30	24	EB	156	148	7	8	4
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	386	374	12	29	61	WB	223	214	9	17	1
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	238	229	9	17	38	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	306	297	8	30	40	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum (DM) 2017						Main St & Plunkett St Pedestrian and IRR 2017						Difference (Main St & Plunkett St Ped. Only and IRR 2017 - DM 2017)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	#	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	455	440	16	6	28	EB	401	389	13	5	28	EB	-54	-51	-3	-1	0
2	St. Anne's Road	WB	162	158	4	3	28	WB	277	273	4	4	28	WB	115	115	0	1	0
3	Bohereen na Goun	NB	153	147	6	21	34	NB	251	237	14	34	34	NB	98	90	8	13	0
4	Bohereen na Goun	SB	180	180	0	42	24	SB	375	369	7	84	19	SB	195	189	7	42	-5
5	St. Mary's St.	NB	143	140	3	44	27	NB	114	110	4	30	29	NB	-29	-29	1	-13	2
6	Dalton's Avenue	EB	279	275	4	39	61	EB	250	247	3	35	61	EB	-29	-28	-1	-3	0
7	Dalton's Avenue	WB	164	162	3	20	61	WB	161	159	2	20	61	WB	-3	-3	-1	0	0
8	Park Road	EB	971	936	35	54	68	EB	987	967	20	56	68	EB	16	31	-14	2	0
9	Park Road	WB	710	697	13	41	68	WB	710	697	13	41	68	WB	0	0	0	0	0
10	N71 South of Countess Road	NB	691	485	206	57	19	NB	685	481	205	56	18	NB	-5	-4	-1	0	0
11	N71 South of Countess Road	SB	824	784	39	64	12	SB	821	791	30	65	12	SB	-2	7	-9	1	0
12	Mission Road west of Kenmare Place	EB	585	579	6	105	7	EB	674	667	7	102	13	EB	89	88	1	-3	7
13	Mission Road west of Kenmare Place	WB	648	531	117	22	62	WB	1058	898	160	37	57	WB	411	368	43	16	-5
14	Port Road South of New Road	NB	647	576	71	47	64	NB	596	533	64	43	64	NB	-51	-44	-8	-4	0
15	Port Road South of New Road	SB	582	572	10	40	68	SB	529	524	5	36	68	SB	-54	-49	-5	-4	0
16	St Margaret's Road	NB	177	173	4	27	39	NB	170	167	3	28	38	NB	-7	-6	-1	1	-1
17	St Margaret's Road	SB	154	151	3	10	65	SB	121	120	2	8	65	SB	-33	-32	-1	-2	-1
18	Rock Road South of Bypass	NB	620	608	12	90	20	NB	605	596	9	89	21	NB	-15	-12	-3	-1	1
19	Rock Road South of Bypass	SB	695	676	19	37	61	SB	692	673	19	36	61	SB	-3	-3	0	0	0
20	N22 Killarney Bypass at Fire Station	WB	645	634	10	39	90	WB	635	626	9	38	90	WB	-10	-8	-2	-1	0
21	N22 Killarney Bypass at Fire Station	EB	590	579	10	51	86	EB	562	554	8	49	86	EB	-27	-25	-2	-2	0
22	Park Road west of Park Road Roundabout	EB	788	759	29	100	31	EB	790	767	23	100	31	EB	2	8	-6	0	0
23	Park Road west of Park Road Roundabout	WB	578	574	4	59	60	WB	569	566	3	59	60	WB	-9	-8	-1	0	0
24	Countess Road south of Park Road	NB	368	321	48	41	24	NB	376	329	47	41	24	NB	8	9	-1	0	0
25	Countess Road south of Park Road	SB	314	312	2	25	54	SB	329	327	2	26	54	SB	15	15	-1	1	0
26	Countess Road	EB	172	147	25	13	61	EB	181	157	24	14	61	EB	9	10	-1	1	0
27	Countess Road	WB	405	372	33	34	61	WB	416	386	31	35	61	WB	11	14	-2	1	0
28	Woodlawn Rd at N71	EB	596	464	132	37	53	EB	594	465	129	37	53	EB	-2	1	-3	0	0
29	Woodlawn Rd at N71	WB	180	179	1	61	17	WB	175	174	1	60	18	WB	-5	-5	0	-2	0
30	Rookery Road South	NB	387	312	75	26	54	NB	387	315	73	26	54	NB	1	3	-2	0	0
31	Rookery Road South	SB	101	97	4	13	47	SB	106	102	4	14	47	SB	5	5	0	1	0
32	Ballycasheen Road west of N22	EB	157	131	26	1	54	EB	158	133	25	2	54	EB	1	2	-1	0	0
33	Ballycasheen Road west of N22	WB	64	63	1	8	53	WB	61	60	1	8	53	WB	-3	-3	0	0	0
34	Woodlawn Road between N22 and N71	EB	521	409	111	4	54	EB	519	410	109	4	54	EB	-2	1	-3	0	0
35	Woodlawn Road between N22 and N71	WB	94	93	2	2	54	WB	89	88	1	1	54	WB	-5	-5	0	0	0
36	Muckcross South of Woodlawn	NB	968	863	108	111	2	NB	968	862	108	111	2	NB	0	-1	0	0	0
37	Muckcross South of Woodlawn	SB	585	569	16	26	59	SB	585	572	13	26	59	SB	0	3	-3	0	0
38	Rock Road North of New Road	NB	577	552	26	67	27	NB	580	560	19	66	27	NB	2	9	-6	0	0
39	Rock Road North of New Road	SB	340	335	5	17	27	SB	342	337	5	17	27	SB	2	2	0	0	0
40	New Road East of St. Mary's Road	EB	254	249	5	70	21	EB	153	150	3	56	21	EB	-101	-99	-2	-14	0
41	New Road East of St. Mary's Road	WB	233	224	9	14	28	WB	92	90	2	6	28	WB	-140	-134	-7	-8	0
42	High Street	NB	588	577	12	101	13	NB	442	429	13	66	23	NB	-146	-147	2	-35	10
43	New Street West of High Street	EB	162	158	3	18	37	EB	442	429	13	66	23	EB	281	271	10	48	-14
44	New Street West of High Street	WB	209	200	10	20	37	WB	0	0	0	0	37	WB	-209	-200	-10	-20	0
45	College Road west of Lewis Road	EB	81	81	0	21	68	EB	251	251	0	39	68	EB	170	170	0	19	0
46	College Road west of Lewis Road	WB	344	333	11	44	43	WB	79	77	2	1	68	WB	-265	-256	-9	-43	25
47	Plunkett Street	WB	431	421	9	57	12	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
48	Lewis Road South of Bypass	NB	198	194	4	27	27	NB	213	209	3	28	27	NB	15	15	-1	1	0
49	Lewis Road South of Bypass	SB	180	177	3	2	28	SB	166	164	2	2	28	SB	-14	-13	-1	0	0
50	Ross Road	NB	279	279	0	102	1	NB	279	279	0	102	1	NB	0	0	0	0	0
51	Ross Road	SB	454	392	61	28	78	SB	454	393	60	28	78	SB	0	1	-1	0	0
52	Inner Relief Road west of High St	EB	109	109	0	22	20	EB	265	258	7	30	24	EB	156	149	7	8	4
53	Inner Relief Road west of High St	WB	163	160	3	13	60	WB	387	375	12	30	61	WB	225	215	9	17	1
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	238	230	9	17	38	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	307	298	9	30	40	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

APPENDIX C

2021 Forecast Year Modelling Outputs

Link No.	Location	Base Year 2015						Do_minimum (DM) 2021						Difference (DM 2021 - Base 2015)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	444	430	13	5	28	EB	498	478	20	6	28	EB	54	47	7	1	0
2	St. Anne's Road	WB	130	127	3	2	28	WB	252	245	6	4	28	WB	122	118	3	1	0
3	Bohereen na Goun	NB	144	139	5	20	34	NB	172	165	7	24	34	NB	28	26	2	4	0
4	Bohereen na Goun	SB	179	179	0	41	24	SB	177	177	0	43	23	SB	-2	-2	0	1	-1
5	St. Mary's St.	NB	130	127	3	40	27	NB	174	170	4	53	26	NB	44	43	1	13	-1
6	Dalton's Avenue	EB	268	265	4	37	61	EB	289	284	5	40	61	EB	21	20	1	3	0
7	Dalton's Avenue	WB	168	166	3	21	61	WB	144	141	3	18	61	WB	-24	-25	1	-3	0
8	Park Road	EB	947	915	33	53	68	EB	1003	964	39	56	68	EB	56	50	6	3	0
9	Park Road	WB	659	648	11	39	68	WB	807	789	18	47	68	WB	148	141	7	8	0
10	N71 South of Countess Road	NB	678	484	195	57	19	NB	713	481	233	56	19	NB	35	-3	38	0	0
11	N71 South of Countess Road	SB	805	768	36	63	12	SB	863	817	45	67	12	SB	58	49	9	4	0
12	Mission Road west of Kenmare Place	EB	583	577	5	105	7	EB	596	590	6	107	6	EB	13	12	1	2	-1
13	Mission Road west of Kenmare Place	WB	609	502	107	20	62	WB	703	564	139	23	62	WB	94	62	32	3	0
14	Port Road South of New Road	NB	609	545	64	44	64	NB	698	613	85	50	63	NB	89	68	21	6	-1
15	Port Road South of New Road	SB	570	560	9	39	68	SB	617	606	12	42	68	SB	48	45	3	3	0
16	St Margaret's Road	NB	166	163	3	25	39	NB	237	231	6	37	38	NB	71	69	3	11	-1
17	St Margaret's Road	SB	131	129	2	9	65	SB	224	218	6	14	66	SB	93	89	4	5	1
18	Rock Road South of Bypass	NB	593	583	10	87	22	NB	651	635	16	96	15	NB	58	52	6	9	-7
19	Rock Road South of Bypass	SB	690	672	18	36	61	SB	683	660	22	35	60	SB	-7	-12	5	-1	-1
20	N22 Killarney Bypass at Fire Station	WB	657	648	9	39	90	WB	638	624	14	39	90	WB	-19	-24	5	0	0
21	N22 Killarney Bypass at Fire Station	EB	570	560	9	49	86	EB	640	625	14	56	86	EB	70	65	5	6	0
22	Park Road west of Park Road Roundabout	EB	766	740	26	100	35	EB	815	780	35	102	23	EB	49	40	9	2	-11
23	Park Road west of Park Road Roundabout	WB	543	539	4	55	60	WB	635	630	5	66	59	WB	92	92	1	11	-1
24	Countess Road south of Park Road	NB	351	309	42	37	25	NB	424	363	62	51	21	NB	73	54	20	13	-4
25	Countess Road south of Park Road	SB	312	310	2	24	54	SB	333	330	3	26	54	SB	21	20	0	2	0
26	Countess Road	EB	176	151	25	13	61	EB	174	148	26	13	61	EB	-2	-4	1	0	0
27	Countess Road	WB	401	372	29	34	61	WB	410	376	35	35	61	WB	9	4	6	1	0
28	Woodlawn Rd at N71	EB	573	455	118	36	53	EB	635	480	156	38	53	EB	63	24	38	2	0
29	Woodlawn Rd at N71	WB	171	169	1	58	18	WB	188	186	2	64	17	WB	17	17	0	6	0
30	Rookery Road South	NB	361	296	65	25	54	NB	434	342	92	29	54	NB	73	46	27	4	0
31	Rookery Road South	SB	99	95	4	13	47	SB	107	103	4	14	47	SB	9	8	1	1	0
32	Ballycasheen Road west of N22	EB	161	136	25	2	54	EB	153	125	28	1	54	EB	-8	-11	3	0	0
33	Ballycasheen Road west of N22	WB	58	57	1	7	53	WB	65	64	1	9	53	WB	7	7	1	2	0
34	Woodlawn Road between N22 and N71	EB	499	400	99	4	54	EB	556	424	132	4	54	EB	57	24	33	0	0
35	Woodlawn Road between N22 and N71	WB	87	86	1	1	54	WB	97	96	2	2	54	WB	10	10	0	0	0
36	Muckross South of Woodlawn	NB	944	866	80	111	2	NB	1020	853	170	111	2	NB	76	-13	90	0	0
37	Muckross South of Woodlawn	SB	570	555	15	25	59	SB	616	598	19	27	59	SB	46	43	3	2	0
38	Rock Road North of New Road	NB	537	514	23	62	27	NB	676	642	33	76	27	NB	139	129	10	14	0
39	Rock Road North of New Road	SB	334	329	5	16	27	SB	358	351	7	18	27	SB	24	22	2	2	0
40	New Road East of St. Mary's Road	EB	235	230	5	63	21	EB	300	293	7	89	16	EB	65	63	2	26	-5
41	New Road East of St. Mary's Road	WB	225	217	8	14	28	WB	248	237	10	15	28	WB	23	21	2	1	0
42	High Street	NB	589	577	11	100	15	NB	585	573	12	101	10	NB	-3	-4	0	1	-5
43	New Street West of High Street	EB	154	151	3	17	37	EB	182	177	4	20	37	EB	28	27	1	3	0
44	New Street West of High Street	WB	202	193	9	19	37	WB	228	216	12	22	37	WB	25	22	3	2	0
45	College Road west of Lewis Road	EB	77	77	0	20	68	EB	92	92	0	23	68	EB	16	16	0	3	0
46	College Road west of Lewis Road	WB	330	320	10	43	43	WB	383	370	13	48	43	WB	53	50	3	6	0
47	Plunkett Street	WB	417	409	8	55	12	WB	465	454	11	61	12	WB	47	45	2	6	0
48	Lewis Road South of Bypass	NB	194	190	4	27	27	NB	228	223	6	30	27	NB	34	32	2	4	0
49	Lewis Road South of Bypass	SB	178	176	3	2	28	SB	193	189	4	2	28	SB	14	13	1	0	0
50	Ross Road	NB	272	272	0	100	1	NB	294	294	0	108	1	NB	22	22	0	8	0
51	Ross Road	SB	442	384	58	28	78	SB	478	405	73	29	78	SB	36	21	15	2	0
52	Inner Relief Road west of High St	EB	106	106	0	22	20	EB	115	115	0	23	20	EB	9	9	0	2	0
53	Inner Relief Road west of High St	WB	158	156	3	12	60	WB	171	167	4	13	60	WB	13	12	1	1	0

Link No.	Location	Do_minimum 2021						Inner Relief Road 2021						Difference (Inner Relief Road - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	475	451	24	6	28	EB	-23	-27	4	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	258	252	6	4	28	WB	6	6	0	0	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	411	395	16	56	34	NB	239	229	9	33	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	331	323	7	84	17	SB	154	147	7	41	-7
5	St. Mary's St.	NB	174	170	4	53	26	NB	151	146	4	38	29	NB	-23	-24	0	-15	3
6	Dalton's Avenue	EB	289	284	5	40	61	EB	282	278	4	39	61	EB	-7	-7	0	-1	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	141	138	3	17	61	WB	-3	-3	0	0	0
8	Park Road	EB	1003	964	39	56	68	EB	1014	979	36	57	68	EB	11	14	-3	1	0
9	Park Road	WB	807	789	18	47	68	WB	820	801	19	48	68	WB	13	12	1	1	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	710	481	229	56	19	NB	-4	0	-4	0	0
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	862	817	45	67	12	SB	-1	0	-1	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	602	595	7	104	8	EB	6	6	0	-2	2
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	719	578	142	24	62	WB	16	14	3	1	0
14	Port Road South of New Road	NB	698	613	85	50	63	NB	689	604	85	49	64	NB	-9	-9	0	-2	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	492	486	5	34	68	SB	-126	-119	-7	-8	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	180	176	4	28	39	NB	-57	-55	-2	-8	1
17	St Margaret's Road	SB	224	218	6	14	66	SB	192	187	5	12	66	SB	-32	-30	-1	-2	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	658	643	15	95	16	NB	6	8	-1	-1	1
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	696	674	22	37	60	SB	13	14	-1	1	0
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	631	618	14	39	90	WB	-6	-6	0	0	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	631	618	13	55	86	EB	-9	-8	-1	-1	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	816	783	33	102	24	EB	1	2	-1	0	0
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	636	632	5	66	60	WB	1	1	0	0	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	418	357	62	50	21	NB	-7	-6	0	0	0
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	324	322	3	25	54	SB	-8	-8	0	-1	0
26	Countess Road	EB	174	148	26	13	61	EB	172	147	26	13	61	EB	-2	-1	0	0	0
27	Countess Road	WB	410	376	35	35	61	WB	406	370	37	34	61	WB	-4	-6	1	0	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	639	480	159	38	53	EB	4	1	3	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	189	187	2	64	17	WB	1	1	0	0	0
30	Rookery Road South	NB	434	342	92	29	54	NB	436	343	94	29	54	NB	2	0	2	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	110	106	4	14	47	SB	3	3	0	0	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	155	127	29	1	54	EB	2	1	1	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	66	65	1	9	53	WB	1	1	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	560	425	135	4	54	EB	4	1	3	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	99	97	2	2	54	WB	1	1	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	855	168	111	2	NB	0	2	-1	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	598	19	27	59	SB	0	0	0	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	654	626	28	75	27	NB	-21	-17	-5	-1	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	370	363	7	18	27	SB	12	12	0	0	1
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	207	203	5	75	19	EB	-92	-90	-2	-14	2
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	93	90	3	6	28	WB	-155	-147	-8	-9	0
42	High Street	NB	585	573	12	101	10	NB	340	338	1	105	5	NB	-246	-235	-11	3	-5
43	New Street West of High Street	EB	182	177	4	20	37	EB	90	88	2	10	37	EB	-92	-90	-2	-10	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	326	313	14	31	37	WB	99	97	2	10	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	88	88	0	23	68	EB	-5	-5	0	0	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	349	337	12	44	43	WB	-34	-33	-1	-4	0
47	Plunkett Street	WB	465	454	11	61	12	WB	433	423	10	56	19	WB	-32	-31	-1	-5	7
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	217	211	6	29	27	NB	-11	-11	0	-1	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	185	181	3	2	28	SB	-8	-8	-1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	406	72	29	78	SB	0	1	-1	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	393	384	10	100	5	EB	279	269	10	77	-14
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	342	328	14	26	61	WB	171	160	10	13	1
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	400	388	12	29	38	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	292	282	10	28	40	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						Gaelscoil Road 2021						Difference (Gaelscoil Road - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	502	482	20	6	28	EB	4	4	0	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	239	234	6	3	28	WB	-12	-12	0	0	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	173	166	7	24	34	NB	1	1	0	0	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	189	189	0	45	23	SB	12	12	0	3	0
5	St. Mary's St.	NB	174	170	4	53	26	NB	163	159	4	50	26	NB	-11	-11	0	-3	0
6	Dalton's Avenue	EB	289	284	5	40	61	EB	291	287	5	40	61	EB	2	2	0	0	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	159	156	3	19	61	WB	15	15	0	2	0
8	Park Road	EB	1003	964	39	56	68	EB	1024	985	39	57	68	EB	21	20	1	1	0
9	Park Road	WB	807	789	18	47	68	WB	797	780	17	46	68	WB	-10	-9	-2	-1	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	717	480	237	56	19	NB	3	-1	4	-1	0
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	861	817	44	67	12	SB	-2	0	-2	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	598	592	6	107	6	EB	2	2	0	0	0
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	709	568	141	23	62	WB	6	4	3	0	0
14	Port Road South of New Road	NB	698	613	85	50	63	NB	700	613	87	50	63	NB	2	0	2	0	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	602	591	11	41	68	SB	-16	-15	-1	-1	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	228	222	5	35	38	NB	-9	-9	-1	-2	0
17	St Margaret's Road	SB	224	218	6	14	66	SB	224	218	6	14	66	SB	1	1	0	0	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	642	627	15	95	15	NB	-9	-8	-1	-1	1
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	676	657	19	35	60	SB	-7	-4	-3	0	0
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	654	644	9	40	90	WB	16	21	-5	1	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	621	608	13	58	85	EB	-19	-17	-2	2	-1
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	696	660	36	93	44	EB	-119	-121	1	-9	21
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	464	462	2	52	60	WB	-171	-168	-3	-14	1
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	430	369	61	43	25	NB	6	6	-1	-7	4
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	327	325	3	26	54	SB	-6	-6	0	0	0
26	Countess Road	EB	174	148	26	13	61	EB	172	146	26	13	61	EB	-2	-2	0	0	0
27	Countess Road	WB	410	376	35	35	61	WB	400	368	32	34	61	WB	-10	-8	-3	-1	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	628	479	149	38	53	EB	-7	0	-6	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	186	185	2	64	17	WB	-2	-2	0	0	0
30	Rookery Road South	NB	434	342	92	29	54	NB	429	342	88	29	54	NB	-5	-1	-4	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	100	96	4	13	47	SB	-8	-7	0	-1	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	145	118	27	1	54	EB	-8	-7	-2	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	64	63	1	9	53	WB	-1	-1	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	550	423	126	4	54	EB	-7	-1	-6	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	96	94	2	2	54	WB	-1	-1	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	852	170	111	2	NB	0	-1	0	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	598	18	27	59	SB	0	1	-1	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	647	615	32	73	27	NB	-28	-27	-1	-3	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	351	345	6	18	27	SB	-7	-6	-1	0	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	291	284	7	86	17	EB	-9	-9	0	-3	1
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	247	236	10	15	28	WB	-1	-1	0	0	0
42	High Street	NB	585	573	12	101	10	NB	586	574	12	101	10	NB	1	1	0	0	0
43	New Street West of High Street	EB	182	177	4	20	37	EB	177	172	4	19	37	EB	-5	-5	0	-1	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	225	213	11	21	37	WB	-3	-3	0	0	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	93	93	0	23	68	EB	0	0	0	0	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	387	374	13	49	43	WB	4	4	0	0	0
47	Plunkett Street	WB	465	454	11	61	12	WB	469	458	11	62	12	WB	4	4	0	1	0
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	191	186	4	27	27	NB	-37	-36	-1	-3	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	189	186	3	2	28	SB	-4	-3	-1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	404	74	29	78	SB	0	-1	1	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	115	115	0	23	20	EB	0	0	0	0	0
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	171	168	4	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	213	209	4	2	40	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	228	225	4	25	40	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						Outer Relief Road Link 2021						Difference (Outer Relief Road Link - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	508	489	19	6	28	EB	10	11	-1	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	277	272	5	4	28	WB	25	27	-1	0	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	166	162	4	23	34	NB	-6	-3	-3	0	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	169	169	0	41	23	SB	-8	-8	0	-1	0
5	St. Mary's St.	NB	174	170	4	53	26	NB	176	173	2	53	26	NB	2	3	-2	0	0
6	Dalton's Avenue	EB	289	284	5	40	61	EB	273	269	4	38	61	EB	-16	-15	-1	-2	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	135	132	3	17	61	WB	-9	-9	-1	-1	0
8	Park Road	EB	1003	964	39	56	68	EB	994	967	26	56	68	EB	-10	3	-13	0	0
9	Park Road	WB	807	789	18	47	68	WB	859	846	13	50	68	WB	52	57	-5	3	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	576	461	115	57	19	NB	-138	-20	-118	1	0
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	840	817	24	67	12	SB	-23	-1	-22	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	588	583	5	106	6	EB	-8	-7	-1	-1	1
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	684	611	72	25	62	WB	-19	47	-66	2	0
14	Port Road South of New Road	NB	698	613	85	50	63	NB	681	637	44	52	63	NB	-17	24	-40	2	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	623	612	10	43	68	SB	5	7	-1	0	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	272	265	6	40	38	NB	34	34	0	3	0
17	St Margaret's Road	SB	224	218	6	14	66	SB	240	236	4	15	66	SB	16	19	-2	1	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	650	636	14	97	13	NB	-1	1	-2	1	-1
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	676	652	23	35	60	SB	-7	-8	1	0	0
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	649	623	26	39	90	WB	11	-1	11	0	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	659	647	12	57	86	EB	19	22	-2	2	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	705	693	12	105	15	EB	-110	-88	-22	3	-8
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	642	626	16	67	59	WB	7	-4	11	1	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	321	307	14	47	20	NB	-104	-56	-48	-4	-1
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	292	289	4	23	54	SB	-40	-41	1	-3	0
26	Countess Road	EB	174	148	26	13	61	EB	143	131	12	12	61	EB	-31	-16	-14	-1	0
27	Countess Road	WB	410	376	35	35	61	WB	441	428	14	39	61	WB	30	52	-21	4	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	506	470	35	38	53	EB	-130	-9	-121	-1	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	212	211	1	50	17	WB	25	25	0	-15	0
30	Rookery Road South	NB	434	342	92	29	54	NB	441	420	22	35	54	NB	7	77	-70	7	0
31	Rookery Road South	SB	107	103	4	14	47	SB	116	113	3	16	47	SB	9	10	-1	2	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	97	92	5	1	54	EB	-56	-33	-23	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	167	165	2	19	52	WB	102	101	0	10	-1
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	427	399	28	4	54	EB	-129	-26	-103	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	121	120	1	2	54	WB	24	24	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	754	754	0	49	4	NB	-266	-99	-170	-62	2
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	619	609	10	26	60	SB	3	12	-9	-1	1
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	698	668	30	78	27	NB	22	26	-3	2	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	358	352	6	18	27	SB	0	1	-1	0	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	291	287	4	90	16	EB	-9	-6	-3	1	-1
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	242	233	9	15	28	WB	-6	-5	-1	0	0
42	High Street	NB	585	573	12	101	10	NB	581	573	7	102	10	NB	-5	0	-4	0	0
43	New Street West of High Street	EB	182	177	4	20	37	EB	190	187	3	21	37	EB	8	10	-2	1	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	226	219	8	22	37	WB	-1	3	-4	0	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	94	94	0	23	68	EB	1	1	0	0	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	390	381	9	49	43	WB	7	11	-4	1	0
47	Plunkett Street	WB	465	454	11	61	12	WB	469	461	8	62	13	WB	4	8	-3	1	0
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	250	245	5	32	27	NB	22	23	-1	2	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	214	208	5	3	28	SB	21	20	1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	438	40	32	78	SB	0	33	-33	2	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	115	115	0	23	20	EB	0	0	0	0	0
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	171	168	3	13	60	WB	0	1	-1	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	272	272	N/A	20	76	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	2	2	N/A	0	78	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						Glebe Link Road 2021						Difference (Glebe Link Road - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	311	299	12	4	28	EB	-187	-179	-8	-2	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	184	181	3	3	28	WB	-67	-64	-3	-1	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	175	170	6	24	34	NB	3	4	-1	1	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	206	206	0	53	22	SB	29	29	0	10	-2
5	St. Mary's St.	NB	174	170	4	53	26	NB	148	145	3	43	28	NB	-26	-25	-1	-10	2
6	Dalton's Avenue	EB	289	284	5	40	61	EB	268	265	4	38	61	EB	-21	-20	-1	-2	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	154	151	3	19	61	WB	10	10	-1	1	0
8	Park Road	EB	1003	964	39	56	68	EB	1072	1042	30	60	68	EB	69	77	-9	4	0
9	Park Road	WB	807	789	18	47	68	WB	859	840	19	50	68	WB	52	52	1	3	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	710	482	228	57	19	NB	-3	2	-5	0	0
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	865	822	43	67	12	SB	2	4	-3	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	563	557	5	101	15	EB	-33	-32	-1	-6	9
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	717	581	136	25	62	WB	14	17	-2	1	0
14	Port Road South of New Road	NB	698	613	85	50	63	NB	729	641	88	52	63	NB	31	28	3	2	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	666	657	9	45	68	SB	49	51	-3	3	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	189	185	4	33	37	NB	-48	-46	-2	-4	-1
17	St Margaret's Road	SB	224	218	6	14	66	SB	143	140	3	9	65	SB	-81	-77	-3	-5	-1
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	645	632	13	92	19	NB	-6	-3	-3	-4	4
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	710	688	21	38	61	SB	27	28	-1	2	1
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	587	574	13	35	90	WB	-51	-50	-1	-4	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	561	551	10	49	86	EB	-79	-74	-5	-6	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	854	822	32	102	24	EB	39	41	-3	0	0
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	651	647	4	68	59	WB	16	17	-1	1	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	422	360	63	52	20	NB	-3	-3	1	1	-1
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	324	322	2	25	54	SB	-9	-8	-1	-1	0
26	Countess Road	EB	174	148	26	13	61	EB	187	160	27	14	61	EB	13	12	1	1	0
27	Countess Road	WB	410	376	35	35	61	WB	417	379	38	35	61	WB	6	4	2	0	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	643	482	161	38	53	EB	8	2	6	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	191	189	2	65	17	WB	3	3	0	0	0
30	Rookery Road South	NB	434	342	92	29	54	NB	443	347	96	29	54	NB	9	4	4	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	117	112	5	15	47	SB	10	9	1	1	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	154	126	28	1	54	EB	1	1	0	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	68	67	1	9	53	WB	3	3	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	564	427	137	5	54	EB	8	3	5	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	101	99	2	2	54	WB	3	3	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	852	172	110	2	NB	0	-1	2	-1	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	599	17	27	59	SB	0	1	-1	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	645	617	28	72	27	NB	-31	-26	-5	-4	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	354	347	7	17	27	SB	-4	-3	0	-1	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	234	230	5	74	19	EB	-65	-63	-2	-15	3
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	187	181	7	11	28	WB	-61	-57	-4	-4	0
42	High Street	NB	585	573	12	101	10	NB	459	446	13	52	28	NB	-126	-128	1	-49	18
43	New Street West of High Street	EB	182	177	4	20	37	EB	361	355	6	39	37	EB	179	178	2	20	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	316	303	13	30	37	WB	89	87	2	9	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	341	332	8	41	68	EB	248	240	8	18	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	435	424	11	58	41	WB	52	54	-2	10	-3
47	Plunkett Street	WB	465	454	11	61	12	WB	418	409	9	55	23	WB	-46	-44	-2	-6	11
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	223	219	4	30	27	NB	-5	-3	-1	-1	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	177	173	3	2	28	SB	-16	-15	-1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	408	70	30	78	SB	0	3	-3	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	115	115	0	14	24	EB	0	0	0	-9	4
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	171	168	3	13	60	WB	0	1	-1	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
62	Glebe Link Road	NB	N/A	N/A	N/A	N/A	N/A	NB	272	267	5	64	30	NB	N/A	N/A	N/A	N/A	N/A
63	Glebe Link Road	SB	N/A	N/A	N/A	N/A	N/A	SB	443	428	14	86	40	SB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						Main Street Pedestrianised 2021						Difference (Main Street Pedestrianised - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	467	448	19	6	28	EB	-31	-30	-1	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	370	363	7	5	28	WB	119	118	1	1	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	141	131	10	19	34	NB	-31	-34	3	-5	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	205	205	0	50	23	SB	28	28	0	8	-1
5	St. Mary's St.	NB	174	170	4	53	26	NB	115	110	5	39	27	NB	-59	-60	1	-14	1
6	Dalton's Avenue	EB	289	284	5	40	61	EB	267	263	4	38	61	EB	-22	-21	-1	-2	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	140	138	3	17	61	WB	-4	-3	0	0	0
8	Park Road	EB	1003	964	39	56	68	EB	1016	989	27	57	68	EB	13	25	-12	1	0
9	Park Road	WB	807	789	18	47	68	WB	785	767	18	46	68	WB	-22	-21	0	-1	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	717	484	233	59	17	NB	4	3	1	2	-2
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	864	827	38	67	12	SB	1	9	-8	1	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	680	673	7	104	9	EB	84	83	1	-3	3
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	1188	999	188	42	57	WB	485	435	49	19	-5
14	Port Road South of New Road	NB	698	613	85	50	63	NB	675	596	80	47	64	NB	-23	-17	-5	-3	1
15	Port Road South of New Road	SB	617	606	12	42	68	SB	696	682	14	47	68	SB	78	77	2	5	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	243	237	6	39	37	NB	6	6	0	3	-1
17	St Margaret's Road	SB	224	218	6	14	66	SB	191	186	5	12	66	SB	-33	-31	-2	-2	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	635	621	14	94	16	NB	-16	-14	-2	-2	2
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	681	658	22	36	61	SB	-2	-2	0	0	1
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	611	597	14	37	90	WB	-27	-26	0	-2	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	607	596	12	53	86	EB	-32	-30	-3	-3	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	834	803	32	102	22	EB	19	22	-3	0	-1
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	650	645	5	68	59	WB	15	15	0	2	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	442	379	63	51	21	NB	18	16	1	1	0
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	382	380	3	30	54	SB	49	50	0	4	0
26	Countess Road	EB	174	148	26	13	61	EB	204	174	30	15	61	EB	30	27	4	2	0
27	Countess Road	WB	410	376	35	35	61	WB	468	430	38	39	61	WB	57	54	2	4	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	636	478	159	38	53	EB	1	-2	3	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	191	189	2	65	17	WB	3	3	0	1	0
30	Rookery Road South	NB	434	342	92	29	54	NB	434	340	94	28	54	NB	0	-2	2	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	112	108	4	15	47	SB	5	5	0	1	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	154	126	28	1	54	EB	1	1	0	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	66	65	1	9	53	WB	1	1	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	558	424	135	4	54	EB	2	-1	3	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	101	99	2	2	54	WB	3	3	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	852	171	111	2	NB	0	-1	1	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	601	16	27	59	SB	0	3	-3	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	700	669	31	78	27	NB	25	27	-2	2	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	366	359	7	19	27	SB	9	9	0	1	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	217	212	5	77	18	EB	-83	-81	-2	-12	2
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	277	267	11	17	28	WB	30	30	0	2	0
42	High Street	NB	585	573	12	101	10	NB	558	537	21	65	27	NB	-27	-36	9	-36	17
43	New Street West of High Street	EB	182	177	4	20	37	EB	515	473	42	5	37	EB	333	295	38	-15	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	0	0	0	0	37	WB	-228	-216	-12	-22	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	114	114	0	26	68	EB	22	22	0	3	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	155	150	5	21	44	WB	-228	-220	-9	-28	1
47	Plunkett Street	WB	465	454	11	61	12	WB	175	172	3	2	48	WB	-290	-282	-8	-59	36
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	241	236	5	31	27	NB	13	13	0	1	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	189	185	3	2	28	SB	-4	-3	-1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	410	68	30	78	SB	0	5	-5	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	115	115	0	15	23	EB	0	0	0	-8	3
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	171	168	4	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						Main St and Plunkett St Pedestrianised 2021						Difference (Main St & Plunkett St Pedestrianised - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	455	437	18	6	28	EB	-43	-41	-2	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	406	399	8	5	28	WB	155	153	2	2	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	143	133	10	19	34	NB	-29	-32	3	-5	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	205	205	0	51	22	SB	28	28	0	9	-1
5	St. Mary's St.	NB	174	170	4	53	26	NB	117	112	5	41	26	NB	-57	-58	1	-12	0
6	Dalton's Avenue	EB	289	284	5	40	61	EB	262	259	4	37	61	EB	-27	-26	-1	-3	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	134	132	3	16	61	WB	-10	-9	-1	-1	0
8	Park Road	EB	1003	964	39	56	68	EB	1044	1012	31	59	68	EB	41	48	-7	3	0
9	Park Road	WB	807	789	18	47	68	WB	838	820	18	49	68	WB	31	31	0	2	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	721	485	236	57	18	NB	7	4	3	1	-1
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	863	819	45	67	12	SB	0	1	-1	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	681	674	8	105	8	EB	85	84	1	-2	2
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	1105	916	190	39	57	WB	402	352	51	16	-5
14	Port Road South of New Road	NB	698	613	85	50	63	NB	661	581	80	46	64	NB	-37	-32	-5	-4	1
15	Port Road South of New Road	SB	617	606	12	42	68	SB	738	724	15	50	68	SB	121	118	3	8	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	266	260	6	43	37	NB	29	29	0	7	-1
17	St Margaret's Road	SB	224	218	6	14	66	SB	188	184	5	12	65	SB	-36	-34	-2	-2	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	641	628	14	94	16	NB	-10	-7	-2	-2	2
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	688	667	21	36	61	SB	5	7	-1	0	1
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	601	588	13	37	90	WB	-37	-35	-1	-2	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	615	603	12	54	86	EB	-25	-22	-3	-2	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	844	811	34	101	26	EB	29	30	-1	0	3
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	675	671	5	71	59	WB	40	40	0	5	-1
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	429	366	63	54	20	NB	4	3	1	3	-1
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	358	355	3	28	54	SB	25	25	0	2	0
26	Countess Road	EB	174	148	26	13	61	EB	191	161	30	14	61	EB	17	14	4	1	0
27	Countess Road	WB	410	376	35	35	61	WB	440	402	38	37	61	WB	29	26	3	2	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	630	473	156	38	53	EB	-6	-6	1	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	189	187	2	65	17	WB	1	1	0	0	0
30	Rookery Road South	NB	434	342	92	29	54	NB	433	340	93	28	54	NB	-1	-2	1	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	112	108	5	15	47	SB	5	5	0	1	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	151	123	28	1	54	EB	-2	-2	0	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	66	64	1	9	53	WB	1	1	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	556	423	134	4	54	EB	0	-2	2	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	99	97	2	2	54	WB	1	1	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	852	171	111	2	NB	0	-1	1	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	598	19	27	59	SB	0	0	0	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	723	692	31	80	27	NB	48	49	-2	4	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	366	359	7	20	26	SB	8	9	0	1	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	218	212	5	79	18	EB	-82	-80	-2	-10	1
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	310	298	12	19	28	WB	62	61	1	4	0
42	High Street	NB	585	573	12	101	10	NB	563	542	20	66	27	NB	-22	-31	9	-36	17
43	New Street West of High Street	EB	182	177	4	20	37	EB	520	479	41	5	37	EB	338	301	37	-15	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	267	267	0	42	68	EB	174	174	0	19	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	84	81	3	1	68	WB	-299	-289	-10	-47	25
47	Plunkett Street	WB	465	454	11	61	12	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	238	233	5	31	27	NB	10	10	-1	1	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	169	166	3	2	28	SB	-24	-23	-1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	407	70	30	78	SB	0	3	-3	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	115	115	0	15	23	EB	0	0	0	-8	3
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	171	168	4	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						New Street Eastbound Only 2021						Difference (New Street Eastbound Only - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	487	467	20	6	28	EB	-11	-11	0	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	259	254	6	4	28	WB	8	8	0	0	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	168	157	11	22	34	NB	-5	-8	4	-1	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	189	189	0	45	23	SB	12	12	0	3	0
5	St. Mary's St.	NB	174	170	4	53	26	NB	158	152	6	49	26	NB	-17	-19	2	-4	0
6	Dalton's Avenue	EB	289	284	5	40	61	EB	286	282	5	40	61	EB	-3	-3	0	0	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	144	141	3	18	61	WB	0	0	0	0	0
8	Park Road	EB	1003	964	39	56	68	EB	1009	976	33	56	68	EB	6	12	-6	1	0
9	Park Road	WB	807	789	18	47	68	WB	809	790	19	47	68	WB	2	1	1	0	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	713	484	230	57	18	NB	0	3	-3	1	-1
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	866	821	45	67	12	SB	3	4	-1	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	613	607	7	106	6	EB	17	17	0	-1	1
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	907	748	159	30	61	WB	204	184	20	7	-1
14	Port Road South of New Road	NB	698	613	85	50	63	NB	706	619	87	51	63	NB	8	6	2	0	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	639	626	13	44	68	SB	21	20	1	2	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	231	226	6	36	38	NB	-6	-5	0	-1	0
17	St Margaret's Road	SB	224	218	6	14	66	SB	218	212	6	14	66	SB	-6	-6	0	0	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	652	636	16	96	15	NB	1	1	0	0	0
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	683	663	20	36	60	SB	1	2	-2	0	0
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	626	612	14	38	90	WB	-11	-11	0	-1	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	631	618	14	55	86	EB	-9	-8	-1	-1	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	821	787	33	102	23	EB	5	7	-1	0	0
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	643	638	5	67	59	WB	8	8	0	1	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	426	364	63	51	21	NB	2	1	1	0	0
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	343	340	3	27	54	SB	10	10	0	1	0
26	Countess Road	EB	174	148	26	13	61	EB	183	155	28	14	61	EB	9	7	2	1	0
27	Countess Road	WB	410	376	35	35	61	WB	429	392	38	36	61	WB	19	16	3	1	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	640	480	161	38	53	EB	5	0	5	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	190	188	2	65	17	WB	2	2	0	0	0
30	Rookery Road South	NB	434	342	92	29	54	NB	438	343	95	29	54	NB	4	1	3	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	109	105	4	14	47	SB	2	2	0	0	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	155	126	29	1	54	EB	2	1	1	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	67	66	1	9	53	WB	2	2	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	562	425	136	4	54	EB	5	1	4	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	100	98	2	2	54	WB	2	2	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	853	170	111	2	NB	0	0	1	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	598	18	27	59	SB	0	0	0	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	675	641	34	76	27	NB	-1	-1	1	0	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	360	354	7	18	27	SB	3	3	-1	0	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	287	279	8	86	17	EB	-13	-14	1	-3	1
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	263	252	11	16	28	WB	15	15	1	1	0
42	High Street	NB	585	573	12	101	10	NB	590	578	12	102	10	NB	5	4	1	0	0
43	New Street West of High Street	EB	182	177	4	20	37	EB	170	165	6	18	37	EB	-12	-13	1	-1	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	88	88	0	22	68	EB	-4	-4	0	0	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	322	312	10	41	43	WB	-61	-58	-3	-7	0
47	Plunkett Street	WB	465	454	11	61	12	WB	401	393	8	52	30	WB	-64	-61	-3	-9	17
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	226	221	5	30	27	NB	-2	-2	0	0	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	189	185	4	2	28	SB	-4	-3	0	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	408	70	30	78	SB	0	3	-3	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	115	115	0	23	20	EB	0	0	0	0	0
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	171	167	4	13	60	WB	0	0	0	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						New Street Upper Westbound Only 2021						Difference (New Street Upper Westbound Only - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	503	474	29	6	28	EB	5	-4	9	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	233	226	7	3	28	WB	-19	-19	1	0	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	207	196	11	28	34	NB	35	31	4	4	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	153	153	0	33	25	SB	-24	-24	0	-9	2
5	St. Mary's St.	NB	174	170	4	53	26	NB	232	225	7	66	25	NB	58	55	3	14	-1
6	Dalton's Avenue	EB	289	284	5	40	61	EB	310	304	6	42	61	EB	20	19	1	2	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	149	144	4	18	61	WB	5	4	1	0	0
8	Park Road	EB	1003	964	39	56	68	EB	999	954	45	55	68	EB	-4	-11	7	-1	0
9	Park Road	WB	807	789	18	47	68	WB	788	768	20	46	68	WB	-19	-21	2	-1	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	713	483	229	57	19	NB	0	3	-3	0	0
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	867	815	52	67	12	SB	4	-2	6	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	605	598	7	111	4	EB	9	8	1	5	-2
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	685	552	134	22	61	WB	-18	-13	-5	-1	-1
14	Port Road South of New Road	NB	698	613	85	50	63	NB	685	609	76	52	62	NB	-13	-4	-9	2	-1
15	Port Road South of New Road	SB	617	606	12	42	68	SB	576	563	13	39	68	SB	-41	-42	1	-3	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	286	277	8	41	38	NB	48	46	2	4	0
17	St Margaret's Road	SB	224	218	6	14	66	SB	280	272	8	17	66	SB	56	54	2	3	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	649	629	21	99	11	NB	-2	-7	5	3	-3
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	654	631	23	34	59	SB	-28	-29	0	-2	-1
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	665	648	17	40	90	WB	27	24	3	1	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	654	634	20	56	86	EB	14	8	6	1	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	792	756	36	103	20	EB	-24	-25	1	1	-4
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	607	600	6	64	60	WB	-28	-30	2	-2	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	413	351	62	47	22	NB	-11	-13	0	-3	1
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	332	329	4	26	54	SB	0	-1	1	0	0
26	Countess Road	EB	174	148	26	13	61	EB	172	144	28	13	61	EB	-2	-4	2	0	0
27	Countess Road	WB	410	376	35	35	61	WB	415	376	38	35	61	WB	4	0	3	0	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	641	479	162	38	53	EB	6	-1	6	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	189	187	2	64	17	WB	1	1	0	0	0
30	Rookery Road South	NB	434	342	92	29	54	NB	435	340	95	28	54	NB	1	-3	4	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	113	108	5	15	47	SB	5	5	1	1	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	160	130	30	1	54	EB	6	5	2	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	66	65	1	9	53	WB	2	1	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	562	425	137	4	54	EB	6	0	5	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	99	97	2	2	54	WB	1	1	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	853	170	111	2	NB	0	0	1	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	595	21	27	59	SB	0	-2	3	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	679	637	42	75	27	NB	3	-6	9	-1	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	337	330	7	17	27	SB	-21	-21	0	-1	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	365	355	10	101	9	EB	65	62	3	12	-8
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	244	232	12	15	28	WB	-3	-5	1	0	0
42	High Street	NB	585	573	12	101	10	NB	532	516	16	102	9	NB	-53	-58	4	1	-1
43	New Street West of High Street	EB	182	177	4	20	37	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
44	New Street West of High Street	WB	228	216	12	22	37	WB	159	148	11	25	26	WB	-68	-68	0	3	-11
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	98	98	0	23	68	EB	5	5	0	0	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	394	378	16	48	44	WB	11	9	3	0	0
47	Plunkett Street	WB	465	454	11	61	12	WB	466	453	13	63	11	WB	2	-1	3	2	-1
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	229	222	7	31	27	NB	1	0	2	1	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	249	242	8	3	28	SB	56	53	4	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	405	73	29	78	SB	0	0	0	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	115	115	0	25	20	EB	0	0	0	2	0
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	171	166	5	13	60	WB	0	-2	2	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						New Road Eastbound Only 2021						Difference (New Road Eastbound Only - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	553	523	30	7	28	EB	55	45	10	1	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	310	302	8	4	28	WB	58	57	2	0	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	153	146	7	21	34	NB	-19	-19	0	-3	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	214	214	0	55	22	SB	38	38	0	12	-2
5	St. Mary's St.	NB	174	170	4	53	26	NB	117	114	3	33	29	NB	-57	-56	-1	-20	3
6	Dalton's Avenue	EB	289	284	5	40	61	EB	296	291	4	42	61	EB	6	7	0	2	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	108	105	3	13	61	WB	-36	-36	0	-5	0
8	Park Road	EB	1003	964	39	56	68	EB	988	945	43	55	68	EB	-15	-19	4	-1	0
9	Park Road	WB	807	789	18	47	68	WB	814	795	18	47	68	WB	7	6	0	0	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	717	483	233	57	19	NB	3	2	1	0	0
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	864	816	48	67	12	SB	1	-2	3	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	578	572	6	109	5	EB	-18	-18	0	2	-1
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	738	599	139	24	62	WB	35	35	1	1	0
14	Port Road South of New Road	NB	698	613	85	50	63	NB	732	647	85	52	63	NB	34	34	0	2	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	510	503	7	35	68	SB	-108	-103	-5	-7	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	417	405	12	62	35	NB	180	173	6	25	-3
17	St Margaret's Road	SB	224	218	6	14	66	SB	262	254	8	17	66	SB	38	36	2	3	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	659	641	18	98	12	NB	8	6	2	2	-2
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	673	652	21	35	60	SB	-10	-8	-1	-1	0
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	627	614	13	39	90	WB	-10	-9	-1	0	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	653	636	17	57	86	EB	13	11	2	1	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	824	788	37	101	27	EB	9	7	2	-1	4
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	663	658	5	68	59	WB	28	27	1	2	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	427	364	63	52	20	NB	3	1	1	2	-1
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	333	329	3	26	54	SB	0	-1	0	0	0
26	Countess Road	EB	174	148	26	13	61	EB	181	153	28	14	61	EB	7	5	2	0	0
27	Countess Road	WB	410	376	35	35	61	WB	416	380	37	35	61	WB	6	4	1	0	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	636	478	158	38	53	EB	1	-1	2	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	191	189	2	65	17	WB	3	3	0	1	0
30	Rookery Road South	NB	434	342	92	29	54	NB	435	341	93	28	54	NB	0	-1	2	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	106	102	4	14	47	SB	-1	-1	0	0	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	152	124	28	1	54	EB	-1	-1	0	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	68	67	1	9	53	WB	3	3	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	558	424	134	4	54	EB	1	-1	2	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	101	99	2	2	54	WB	3	3	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	852	171	111	2	NB	0	-1	1	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	597	20	27	59	SB	0	-1	1	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	818	778	40	91	27	NB	143	135	7	15	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	309	303	7	23	28	SB	-49	-48	-1	4	1
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	280	274	6	98	12	EB	-20	-19	-1	9	-5
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
42	High Street	NB	585	573	12	101	10	NB	578	565	13	102	8	NB	-7	-9	1	1	-2
43	New Street West of High Street	EB	182	177	4	20	37	EB	197	192	5	21	37	EB	15	14	1	2	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	274	257	17	26	37	WB	46	41	5	4	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	100	100	0	24	68	EB	8	8	0	1	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	447	430	17	53	43	WB	64	61	4	5	0
47	Plunkett Street	WB	465	454	11	61	12	WB	507	493	14	67	10	WB	43	39	3	6	-2
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	238	232	7	32	27	NB	10	9	1	1	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	200	196	5	2	28	SB	8	7	1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	405	72	29	78	SB	0	0	0	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	115	115	0	24	20	EB	0	0	0	0	0
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	171	167	4	13	60	WB	0	-1	1	0	0
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						N22/Lewis Rd Banned RT 2021						Difference (N22/Lewis Rd Banned RT 2021 - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	533	508	25	6	28	EB	35	30	5	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	384	375	10	5	28	WB	133	129	3	1	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	161	155	6	22	34	NB	-11	-10	-1	-1	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	175	175	0	44	23	SB	-2	-2	0	1	-1
5	St. Mary's St.	NB	174	170	4	53	26	NB	165	162	3	50	27	NB	-9	-8	-1	-3	1
6	Dalton's Avenue	EB	289	284	5	40	61	EB	315	309	6	43	61	EB	25	25	1	3	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	111	108	3	13	61	WB	-33	-33	0	-4	0
8	Park Road	EB	1003	964	39	56	68	EB	1091	1047	44	61	68	EB	88	83	5	5	0
9	Park Road	WB	807	789	18	47	68	WB	860	838	22	50	68	WB	53	49	4	3	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	712	483	229	56	19	NB	-2	2	-4	0	0
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	865	817	48	67	12	SB	2	0	2	0	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	605	598	7	108	5	EB	9	8	0	2	-1
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	723	584	139	24	62	WB	20	20	0	1	0
14	Port Road South of New Road	NB	698	613	85	50	63	NB	719	630	89	50	64	NB	21	17	4	0	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	641	629	12	44	68	SB	24	24	0	2	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	274	266	8	40	38	NB	37	35	2	4	0
17	St Margaret's Road	SB	224	218	6	14	66	SB	242	234	8	15	66	SB	18	16	2	1	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	704	682	22	99	13	NB	53	47	6	3	-2
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	714	690	24	37	60	SB	31	30	1	2	0
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	593	572	22	35	90	WB	-45	-52	7	-4	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	562	540	22	48	86	EB	-78	-86	8	-7	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	892	854	38	105	15	EB	77	74	3	3	-8
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	695	687	8	72	59	WB	60	56	4	6	-1
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	421	358	63	54	19	NB	-3	-5	1	3	-2
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	351	347	4	27	54	SB	18	17	1	1	0
26	Countess Road	EB	174	148	26	13	61	EB	176	148	28	13	61	EB	2	0	2	0	0
27	Countess Road	WB	410	376	35	35	61	WB	418	382	37	35	61	WB	8	6	2	0	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	640	480	160	38	53	EB	5	1	5	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	189	187	2	64	17	WB	2	1	0	0	0
30	Rookery Road South	NB	434	342	92	29	54	NB	434	339	94	28	54	NB	-1	-3	3	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	123	117	5	16	47	SB	15	14	1	2	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	163	134	29	1	54	EB	10	9	1	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	67	65	2	8	53	WB	2	1	1	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	562	426	136	4	54	EB	6	2	4	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	99	97	2	2	54	WB	2	1	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	855	168	111	2	NB	0	2	-1	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	597	20	27	59	SB	0	-1	1	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	794	753	41	87	27	NB	119	111	8	11	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	368	360	8	20	27	SB	11	9	1	2	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	274	269	6	99	11	EB	-25	-24	-1	10	-6
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	234	223	11	14	28	WB	-14	-14	0	-1	0
42	High Street	NB	585	573	12	101	10	NB	585	574	11	103	7	NB	0	1	-1	2	-3
43	New Street West of High Street	EB	182	177	4	20	37	EB	221	216	5	24	37	EB	39	39	1	4	0
44	New Street West of High Street	WB	228	216	12	22	37	WB	245	232	13	23	37	WB	17	16	1	2	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	100	100	0	23	68	EB	7	7	0	1	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	404	390	15	50	44	WB	22	20	2	2	0
47	Plunkett Street	WB	465	454	11	61	12	WB	476	464	13	62	15	WB	12	10	2	1	2
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	109	106	3	17	27	NB	-119	-117	-2	-13	-1
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	148	145	3	2	28	SB	-44	-43	-1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	406	72	29	78	SB	0	1	-1	0	0
52	Inner Relief Road west of High St	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
53	Inner Relief Road west of High St	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
62	Glebe Link Road	NB	N/A	N/A	N/A	N/A	N/A	NB	N/A	N/A	N/A	N/A	N/A	NB	N/A	N/A	N/A	N/A	N/A
63	Glebe Link Road	SB	N/A	N/A	N/A	N/A	N/A	SB	N/A	N/A	N/A	N/A	N/A	SB	N/A	N/A	N/A	N/A	N/A

Link No.	Location	Do_minimum 2021						Main St Pedestrian and IRR 2021						Difference (Main St Pedestrian and IRR - Do_minimum 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	453	434	19	6	28	EB	-45	-43	-1	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	363	357	6	5	28	WB	112	112	0	1	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	274	259	15	37	34	NB	102	94	8	13	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	355	346	9	80	20	SB	178	169	9	37	-4
5	St. Mary's St.	NB	174	170	4	53	26	NB	132	127	5	35	29	NB	-42	-43	1	-18	3
6	Dalton's Avenue	EB	289	284	5	40	61	EB	272	268	3	38	61	EB	-18	-16	-1	-2	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	147	144	3	18	61	WB	3	3	0	0	0
8	Park Road	EB	1003	964	39	56	68	EB	1020	995	25	57	68	EB	17	30	-13	2	0
9	Park Road	WB	807	789	18	47	68	WB	778	760	17	45	68	WB	-29	-28	-1	-2	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	716	485	232	58	17	NB	3	4	-1	2	-2
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	866	827	39	67	12	SB	3	10	-7	1	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	676	669	8	103	10	EB	80	79	2	-3	4
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	1176	988	188	42	57	WB	473	424	49	18	-5
14	Port Road South of New Road	NB	698	613	85	50	63	NB	657	580	77	48	63	NB	-41	-33	-8	-3	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	580	574	6	40	68	SB	-38	-32	-6	-2	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	217	213	4	36	37	NB	-20	-18	-2	0	-1
17	St Margaret's Road	SB	224	218	6	14	66	SB	171	168	3	11	65	SB	-53	-50	-3	-3	0
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	641	629	12	96	15	NB	-11	-7	-4	0	0
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	674	654	20	36	60	SB	-9	-6	-3	0	0
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	623	611	13	38	90	WB	-15	-13	-2	-1	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	613	602	10	54	86	EB	-27	-23	-4	-2	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	816	787	29	102	24	EB	1	6	-5	0	1
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	628	624	4	66	59	WB	-7	-6	0	0	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	419	359	61	48	22	NB	-5	-4	-1	-3	1
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	368	365	2	29	54	SB	35	35	-1	3	0
26	Countess Road	EB	174	148	26	13	61	EB	189	162	28	14	61	EB	15	14	1	1	0
27	Countess Road	WB	410	376	35	35	61	WB	459	421	38	38	61	WB	49	45	3	4	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	639	480	159	38	53	EB	4	1	3	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	192	191	2	66	17	WB	5	4	0	1	0
30	Rookery Road South	NB	434	342	92	29	54	NB	435	342	93	29	54	NB	1	0	2	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	115	111	5	15	47	SB	8	8	0	1	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	157	129	29	1	54	EB	4	4	1	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	67	66	1	9	53	WB	3	3	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	561	426	135	4	54	EB	5	2	3	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	102	100	2	2	54	WB	5	5	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	853	170	111	2	NB	0	0	0	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	600	16	27	59	SB	0	3	-3	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	673	648	25	76	27	NB	-3	5	-8	0	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	332	326	6	17	27	SB	-26	-24	-2	-1	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	168	164	4	68	19	EB	-132	-129	-3	-21	3
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	106	103	2	6	28	WB	-142	-134	-8	-8	0
42	High Street	NB	585	573	12	101	10	NB	469	453	16	66	24	NB	-116	-120	4	-35	14
43	New Street West of High Street	EB	182	177	4	20	37	EB	469	453	16	66	24	EB	287	276	12	47	-13
44	New Street West of High Street	WB	228	216	12	22	37	WB	0	0	0	0	37	WB	-228	-216	-12	-22	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	115	115	0	26	68	EB	22	22	0	3	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	146	142	4	19	44	WB	-237	-228	-9	-29	1
47	Plunkett Street	WB	465	454	11	61	12	WB	164	161	3	2	48	WB	-301	-293	-8	-59	36
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	232	227	5	30	27	NB	4	5	-1	0	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	184	181	3	2	28	SB	-9	-8	-1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	411	67	30	78	SB	0	6	-6	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	281	274	7	33	24	EB	166	159	7	9	4
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	371	354	17	28	61	WB	200	187	13	15	1
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	269	260	9	19	38	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	303	291	12	29	40	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

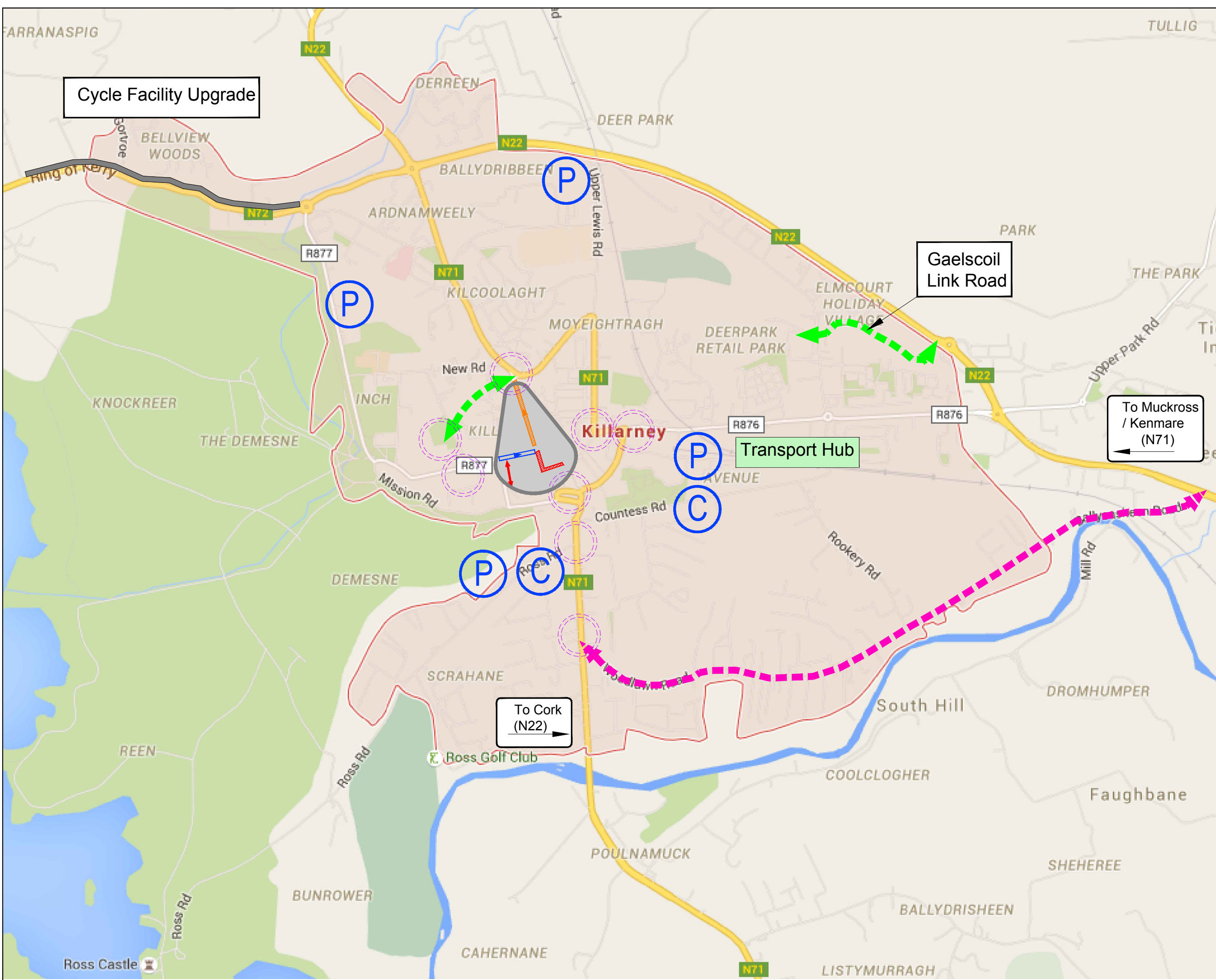
Link No.	Location	Do_minimum (DM) 2021						Main St & Plunkett St Pedestrian and IRR 2021						Difference (Main St & Plunkett St Ped. Only and IRR 2021 - DM 2021)					
		Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	Direction	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed	#	Demand Flow	Actual flow	Queued Flow	VoverC %	Net Speed
1	St. Anne's Road	EB	498	478	20	6	28	EB	451	432	18	6	28	EB	-47	-46	-2	0	0
2	St. Anne's Road	WB	252	245	6	4	28	WB	383	376	6	5	28	WB	131	131	0	1	0
3	Bohereen na Goun	NB	172	165	7	24	34	NB	277	263	14	38	34	NB	105	98	7	14	0
4	Bohereen na Goun	SB	177	177	0	43	23	SB	359	350	10	81	19	SB	183	173	10	39	-5
5	St. Mary's St.	NB	174	170	4	53	26	NB	133	128	5	35	29	NB	-41	-42	1	-18	3
6	Dalton's Avenue	EB	289	284	5	40	61	EB	272	269	3	39	61	EB	-17	-15	-1	-1	0
7	Dalton's Avenue	WB	144	141	3	18	61	WB	146	144	3	18	61	WB	2	3	-1	0	0
8	Park Road	EB	1003	964	39	56	68	EB	1032	1005	28	58	68	EB	29	40	-11	2	0
9	Park Road	WB	807	789	18	47	68	WB	813	796	17	47	68	WB	6	7	-1	0	0
10	N71 South of Countess Road	NB	713	481	233	56	19	NB	716	484	232	57	18	NB	3	3	-1	1	-1
11	N71 South of Countess Road	SB	863	817	45	67	12	SB	866	826	39	67	12	SB	3	9	-6	1	0
12	Mission Road west of Kenmare Place	EB	596	590	6	107	6	EB	675	667	8	103	10	EB	79	77	2	-3	4
13	Mission Road west of Kenmare Place	WB	703	564	139	23	62	WB	1112	928	184	39	57	WB	409	364	45	16	-5
14	Port Road South of New Road	NB	698	613	85	50	63	NB	644	568	75	47	63	NB	-54	-44	-10	-3	0
15	Port Road South of New Road	SB	617	606	12	42	68	SB	599	593	7	41	68	SB	-18	-13	-5	-1	0
16	St Margaret's Road	NB	237	231	6	37	38	NB	233	229	4	39	37	NB	-4	-2	-2	3	-1
17	St Margaret's Road	SB	224	218	6	14	66	SB	168	165	3	11	65	SB	-56	-52	-3	-3	-1
18	Rock Road South of Bypass	NB	651	635	16	96	15	NB	643	631	12	96	15	NB	-8	-4	-4	0	0
19	Rock Road South of Bypass	SB	683	660	22	35	60	SB	676	657	20	36	60	SB	-6	-4	-3	0	0
20	N22 Killarney Bypass at Fire Station	WB	638	624	14	39	90	WB	617	604	13	38	90	WB	-21	-20	-1	-1	0
21	N22 Killarney Bypass at Fire Station	EB	640	625	14	56	86	EB	617	607	10	54	86	EB	-23	-19	-4	-2	0
22	Park Road west of Park Road Roundabout	EB	815	780	35	102	23	EB	830	799	31	102	23	EB	14	18	-4	0	0
23	Park Road west of Park Road Roundabout	WB	635	630	5	66	59	WB	648	644	4	67	59	WB	13	14	-1	1	0
24	Countess Road south of Park Road	NB	424	363	62	51	21	NB	412	352	60	50	21	NB	-13	-11	-2	-1	0
25	Countess Road south of Park Road	SB	333	330	3	26	54	SB	341	338	2	27	54	SB	8	8	-1	1	0
26	Countess Road	EB	174	148	26	13	61	EB	177	150	27	13	61	EB	3	2	1	0	0
27	Countess Road	WB	410	376	35	35	61	WB	434	396	38	36	61	WB	24	21	3	2	0
28	Woodlawn Rd at N71	EB	635	480	156	38	53	EB	638	480	158	38	53	EB	3	1	3	0	0
29	Woodlawn Rd at N71	WB	188	186	2	64	17	WB	191	189	2	65	17	WB	3	3	0	1	0
30	Rookery Road South	NB	434	342	92	29	54	NB	439	345	94	29	54	NB	5	3	3	0	0
31	Rookery Road South	SB	107	103	4	14	47	SB	113	108	5	15	47	SB	5	5	0	1	0
32	Ballycasheen Road west of N22	EB	153	125	28	1	54	EB	152	124	28	1	54	EB	-1	-1	0	0	0
33	Ballycasheen Road west of N22	WB	65	64	1	9	53	WB	67	66	1	9	53	WB	2	2	0	0	0
34	Woodlawn Road between N22 and N71	EB	556	424	132	4	54	EB	560	426	134	4	54	EB	4	1	2	0	0
35	Woodlawn Road between N22 and N71	WB	97	96	2	2	54	WB	101	99	2	2	54	WB	3	3	0	0	0
36	Muckcross South of Woodlawn	NB	1020	853	170	111	2	NB	1020	853	170	111	2	NB	0	0	0	0	0
37	Muckcross South of Woodlawn	SB	616	598	19	27	59	SB	616	600	16	27	59	SB	0	2	-2	0	0
38	Rock Road North of New Road	NB	676	642	33	76	27	NB	686	660	26	77	27	NB	10	17	-7	1	0
39	Rock Road North of New Road	SB	358	351	7	18	27	SB	329	324	5	17	27	SB	-29	-27	-2	-1	0
40	New Road East of St. Mary's Road	EB	300	293	7	89	16	EB	166	163	4	69	19	EB	-133	-130	-3	-20	3
41	New Road East of St. Mary's Road	WB	248	237	10	15	28	WB	114	111	3	7	28	WB	-134	-126	-8	-8	0
42	High Street	NB	585	573	12	101	10	NB	476	460	16	67	24	NB	-110	-114	4	-35	14
43	New Street West of High Street	EB	182	177	4	20	37	EB	476	460	16	67	24	EB	294	283	11	47	-13
44	New Street West of High Street	WB	228	216	12	22	37	WB	0	0	0	0	37	WB	-228	-216	-12	-22	0
45	College Road west of Lewis Road	EB	92	92	0	23	68	EB	266	266	0	42	68	EB	173	173	0	19	0
46	College Road west of Lewis Road	WB	383	370	13	48	43	WB	84	81	3	1	68	WB	-299	-289	-10	-47	25
47	Plunkett Street	WB	465	454	11	61	12	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
48	Lewis Road South of Bypass	NB	228	223	6	30	27	NB	235	230	5	31	27	NB	7	8	-1	0	0
49	Lewis Road South of Bypass	SB	193	189	4	2	28	SB	178	175	3	2	28	SB	-15	-14	-1	0	0
50	Ross Road	NB	294	294	0	108	1	NB	294	294	0	108	1	NB	0	0	0	0	0
51	Ross Road	SB	478	405	73	29	78	SB	478	410	68	30	78	SB	0	5	-5	0	0
52	Inner Relief Road west of High St	EB	115	115	0	23	20	EB	279	272	7	32	24	EB	164	157	7	9	4
53	Inner Relief Road west of High St	WB	171	167	4	13	60	WB	372	354	18	28	61	WB	201	186	14	15	1
54	Inner Relief Road Link	EB	N/A	N/A	N/A	N/A	N/A	EB	273	264	9	20	37	EB	N/A	N/A	N/A	N/A	N/A
55	Inner Relief Road Link	WB	N/A	N/A	N/A	N/A	N/A	WB	309	296	13	30	40	WB	N/A	N/A	N/A	N/A	N/A
56	Deer Park Link Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
57	Deer Park Link Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
58	Ross Road to N71 Muckcross Road	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
59	Ross Road to N71 Muckcross Road	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A
60	Outer Relief Road N22 to N71	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A	EB	N/A	N/A	N/A	N/A	N/A
61	Outer Relief Road N22 to N71	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A	WB	N/A	N/A	N/A	N/A	N/A

APPENDIX 4 - Study Recommendations

Appendix 4A - Overview

Appendix 4B - Town Centre Core Area

Appendix 4C – Proposed Upgrade to The Hahah



Cycle Facility Upgrade

Gaelscoil Link Road

Transport Hub

To Muckross / Kenmare (N71)

To Cork (N22)

Legend:


- Proposed Inner Relief / Link Roads
- Traffic Calming / Enhanced Pedestrian Facilities
- Pedestrian Priority Zone & Vehicle Access Restrictions
- Proposed One-way Road
- Junction Enhancement
- Other Pedestrian Enhancements
- Killarney Town Centre, Pedestrian Priority
- Proposed Road Upgrade
- Preferred Location for New / Enhanced Car Parking
- Preferred Location for New & Additional Coach Parking
- New Cycle / Footway Facility

B	04.10.16	Issued For Report	COC	SQ	JOL
A	19.04.16	Issued For Approval	COC	SQ	JOL
Rev.	Date	Description	by	chk'd	app


Project: KILLARNEY TOWN TRAFFIC / TRAFFIC MANAGEMENT STUDY
KILLARNEY, CO. KERRY

Title: RECOMMENDED STRATEGY

Client: KERRY COUNTY COUNCIL



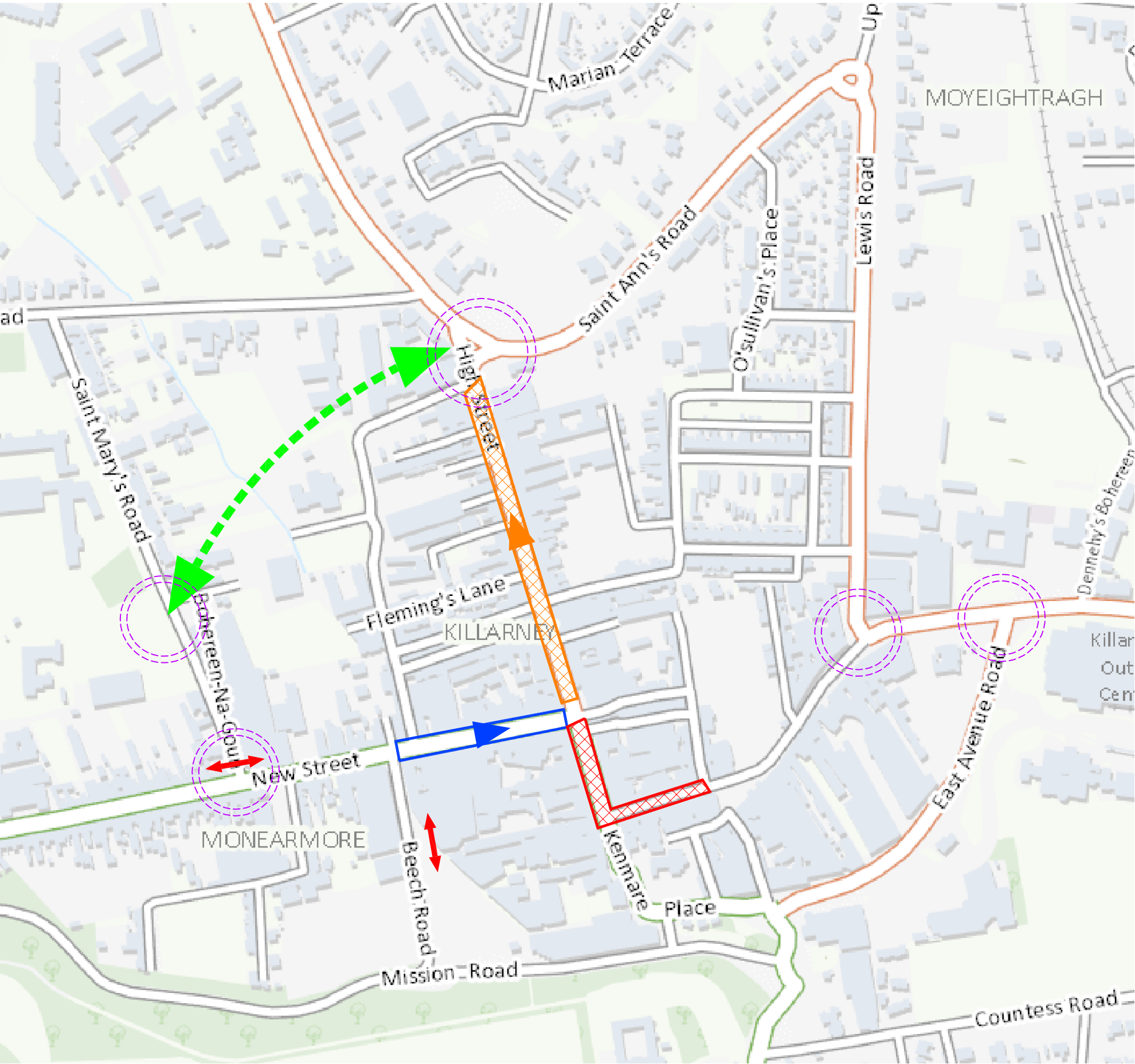
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Scales (A1)		NTS		Drg. No.	Rev.
Drawn	DL	APRIL 2016		16925-SK03	B
Ch'd(D.O.)	COC	APRIL 2016			
Ch'd(Eng.)	SQ	APRIL 2016			
Approved	JOL	APRIL 2016			



Legend:

Proposed Inner Relief / Link Roads

Traffic Calming / Enhanced Pedestrian Facilities

Pedestrian Priority Zone & Vehicle Access Restrictions

Proposed One-way Road

Junction Enhancement

Other Pedestrian Enhancements

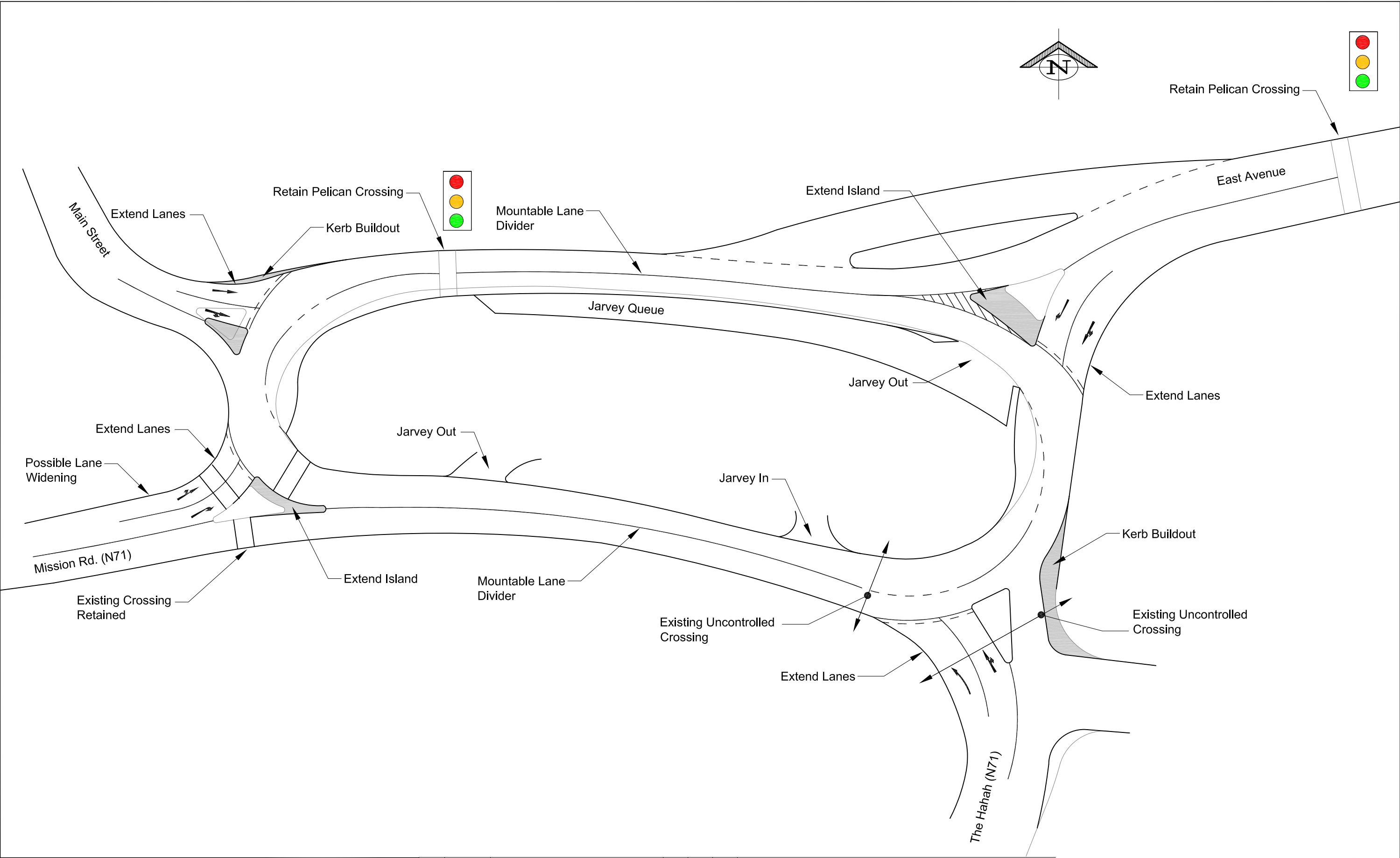
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Rev.	Date	Description				by	ch'd	app
Project		KILLARNEY TOWN TRAFFIC / TRAFFIC MANAGEMENT STUDY KILLARNEY, CO. KERRY						
Title		TOWN CENTRE CORE AREA- RECOMMENDED STRATEGY						
Client		KERRY COUNTY COUNCIL						


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Scales (A1)		NTS		Drg. No.		Rev.	
Drawn	DL	APRIL 2016		16925-SK02		A	
Ch'd(D.O.)	COC	APRIL 2016					
Ch'd(Eng.)	SO	APRIL 2016					
Approved	JOL	APRIL 2016					



						Project	<div><div></div><div><div>Malachy Walsh and Partners</div><div>Engineering and Environmental Consultants</div><div>Cork Tralee London Limerick</div></div></div>	<div><div>Scales (A3)</div><div>NTS</div></div> <div><div>Drawn</div><div>JC</div><div>19.04.2016</div></div> <div><div>Checked</div><div>COC</div><div>19.04.2016</div></div>	<div><div>Drg. No.</div><div>16925-SK01</div></div>	<div><div>Rev.</div><div>A</div></div>
	Rev.	Date	Description	by	ch'd	app	Title	Killarney Town Traffic Model/Traffic Management Study	Proposed Upgrade - The Hahah	
Client										
Kerry County Council										